THE BRICKBUILDER.

VOL. 14 SEPTEMBER 1905 NO. 9

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FROM WORK OF LORD & HEWLETT, MAGINNIS, WALSH & SULLIVAN, McKIM, MEAD & WHITE, WHEELWRIGHT & HAVEN, HENRY VAUGHAN.

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FAÇADE OF CHURCH OF SAN DOMINGO, SALAMANCA, SPAIN.

THE BRICKBVILDER

VOL. 14 No. 9 — DEVOTED · TO · THE · INTERESTS · OF ARCHITECTVRE · IN · MATERIALS · OF · CLAY — SEPTEMBER 1905

THE BRICKBUILDER.

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Advertisements will be printed on cover pages only.

COVER DESIGN COMPETITION AWARD.

ON Wednesday, August 23, Messrs. Chester H. Aldrich, Bertram G. Goodhue, Jules Guerin and Henry P. Kirby, who had been requested to serve as a jury of award, met at the City Club, New York, to examine and report upon the drawings submitted in competition for a prize of one hundred dollars offered by the publishers of *Indoors and Out* for the cover design adjudged the best.

This competition, it must be confessed, was, to a considerable degree, disappointing, despite the large number of drawings submitted. In the opinion of the jury, the average of merit was regrettably low, even the prize-winning design being by no means so successful as might have been expected.

The awards were made as follows:

First prize of one hundred dollars, Carroll M. Bill, Boston, Mass.; first mention, Claude F. Bragdon, Rochester, N. Y.; second mention, Herbert William Meyer, Brooklyn, N. Y.; third mention, Howard Sill, Baltimore, Md.

After making the above award, the publishers availed themselves of the terms of the competition, which permitted the purchase of any drawing, and selected for use the design of Howard Sill, which seemed in their opinion best suited for the purpose.

CHARLES A. CUMMINGS.

BY the death on August 11 of Mr. Charles Amos Cummings, the architectural profession has lost one of its most honored members. He was one of the organizers of the Boston Society of Architects in 1867, its president for many years, and was closely identified with that organization up to the time of his death. As the senior partner of the firm of Cummings & Sears he did some of the most notable buildings in the city of Boston, all of which were marked by a quiet refinement of detail and unity of conception as a whole which were considerably in advance of most of the work performed in the early seventies. The New Old South Church, the Steinway Hall, now practically obliterated by remodeling, and a number of commercial buildings, the bulk of which were erected shortly after the great Boston fire of 1872, all testify to Mr. Cummings's marked abilities. He retired from business a number of years ago, having ample means to indulge his literary and artistic tastes. He wrote a number of excellent works upon the subject of architecture, and his critical essays appeared in the leading architectural papers, always commanding attention and respect. By his will he leaves to the Museum of Fine Arts, of which he was a trustee, the sum of fifty thousand dollars for the purchase of photographs, casts, or other reproductions of architecture, the selection to be made with the advice of the Boston Society of Architects. His whole life was a consistent, continuous growth, and his achievements reflect the highest credit upon the architectural profession.

ALFRED WATERHOUSE.

NO one who had the good fortune to have met could ever forget the strong personality of Alfred Waterhouse, the celebrated English architect who died during the past month in his seventy-sixth year. All his work was carried out in the best embodiment of what has been classed as the Victorian Gothic. His Town Hall and Law Courts of Manchester and his Natural History Museum at South Kensington are among the most successful buildings which have been erected in England, and would alone have been sufficient to establish his title to high architectural ability. In addition he has done a quantity of most excellent public and private work, and he enjoyed all his life an excellent practice. He was a president of the Royal Institute of British Architects, received its gold medal in 1878, was a corresponding member of the Institute of France, and an associate in the academies of Vienna, Milan, Brussels and Berlin.

Ecclesiastical Architecture.

THE CATHOLIC CHURCH.

PAPER I.

BY REV. JOHN TALBOT SMITH, D. D.

THE aim of this article is to benefit conscientious architects in their endeavor to serve both religion and art by the erection of artistic and useful church buildings. The present century holds brilliant promise for the workers in the ecclesiastical field. For the Roman Catholic side of the house it may safely be said that immense work is to be done this century in the building of churches, schools, educational and charitable institutions, convents and monasteries, mission houses and parochial residences. The Catholic body in the United States and Canada numbers more than fifteen millions; add Cuba, Porto Rico and the Philippines, which have lately come within the sphere of our influence, and include Mexico, whose relations with us become more intimate every day, and the dullest imagination can hardly fail to see the splendid field of opportunity now open to the architect.

The Catholic peoples are church builders par excellence, and the American branch of the Catholic body in all probability bears away the palm from its brethren on that score; for the simple reason that America is a new land and all the necessary work of building had to be done within a short period. A century back there might have been fifty Catholic churches in this country, whereas to-day there must be more than ten thousand. It would not be rash to predict that the number will be easily doubled by the end of this century. Immigration from Ireland and Germany has not ceased, though it has greatly diminished; but the loss has been more than made up for by the immigration from Poland, Italy, the Slav countries and the Orient. Churches must be built for these peoples; schools, charities, colleges and mission residences must be built for them; where they are numerous their buildings will be, must be magnificent, for it is their nature to build magnificently, if not always in the best taste; though they may be parsimonious in other matters, the temple with them must be the house beautiful. One may suppose this is mere commonplace to the experienced architect, yet the younger men are aware of it only vaguely.

It may seem unpractical to include our new possessions in the field of possibilities, as well as Cuba and Mexico. Yet it should be remembered that the leading prelates and many of the clergy in these new countries will be in time Americans by birth or training; they will seek their supplies from the country with which they are familiar; and naturally they will introduce into the new territory the architectural forms most common with us; even the natives will find it convenient to adopt many of our improvements in building. As to Cuba and Mexico, already the imitation of American forms has taken root, and the leading clergy get some of their ecclesiastical necessities or ornaments from our merchants.

The building of a church means also its ornamentation, and a host of arts will be called upon to complete what the architect has only begun, it may be said. Altars, statues, candelabra, sacred vessels, vestments, rich embroideries, carpets, windows, frescoes must be supplied, and will give profitable employment to thousands of artists and craftsmen. As each nation has its own traditions about the church and its ornamentation, most curious demands will be made upon architects and decorators. *Adaptation* will be the watchword of the century in every department, and it will be no small task for the interested to graft ancient traditional forms artistically on the American conditions. The commercial architect will have no scruples and no difficulties in such matters. So that he gets his fee the Mahometan minaret may jostle the Gothic spire, and the Byzantine roof cap an American rectangle. The conscientious architect, as usual, will have the difficulties, the honors and the lesser money recompense. This seems to be inevitable in ordinary human conditions. Man cannot win equal success in the market and the studio.

If the prospect is so fair in the Roman Catholic field alone, architect and craftsman must exult over the whole prospect, which takes in the future achievement of all religious denominations. Surely there ought to be deep inspiration and stimulus in conditions so promising. Of course there are drawbacks, and the picture does not lack dark shadows. It is a drawback, for example, that the Catholic immigrants are very poor, that money will not be plentiful and that quantity and color will often take the place of artistic form and exquisite tone. This cannot be helped, and the architect will merely have to do his best with the inevitable. On the other hand, the older parishes will make up for this condition by building more artistically and more expensively. The blunders of the past will also provide a drawback of serious strength. The clergy have long memories and strong traditions. The commercial architect, the incompetent architect and other frauds have fooled them often, led them into the quagmire of debt or into public ridicule by nightmares of buildings, or, led astray by their own confidence, the priests often built beyond the financial strength of the parish and died in the effort to remove the burden. The buildings erected under such conditions are monuments of warning, perpetual lessons in folly to the next generation. Only the born fools will be fooled a second time by the same impostor or led into a repetition of popular follies by their own vanity.

The churches of the coming century will be finer than those existing, better suited also to the conditions. They will cost no more than the parish can easily afford, will carry no waste material in the shape of lofty walls, ornamental towers and flying buttresses, and will be built with less regard to the neighboring cathedral and more to the comfort of the trustees and the congregation. The grand church is now so intimately connected in the minds of the Catholic clergy with the grand debt, which often kills two men to pay, that very few pastors will undertake it unless in the proper places. It is the ambition of every parish priest to build a handsome church. The ambition remains in a modified form; if it can be attained without heaping up an enormous debt.

From every point of view the situation is favorable, and the architect may fairly be said to control the situation. At least he has the key to it and may secure the full control if he so desires. He alone has the knowledge and skill absolutely necessary for the erection of safe and

beautiful public buildings. The builders of temples and schools know that nothing substantial can be accomplished without him, and they are at all times willing to be led by him, too willing, in fact, if experience teaches anything. In this country the Catholic priest is always the financial manager of the parish and must look after the revenues. When church or school or residence is building, the task of collecting the funds and supervising the architect is large enough for him. For the beauty, strength and fitness of the building he must of necessity depend absolutely upon the architect, and he is more than willing to leave all the details to that official.

I know that there have been many bitter experiences which proclaim a contrary condition. The complaint has often been made by architects that the Catholic priest is unapproachable and difficult to deal with in business matters. It surprised me to hear a young architect say that he had never acquired the courage to approach a Catholic priest and more than once had turned away from the door of the parochial residence in sheer despair of getting a good understanding with a being so incomprehensible as its resident. While this shyness may be explicable, it has little justification in fact. The Catholic clergy are by the nature of their profession very approachable, but at the same time, by reason of rather unpleasant experience with impostors, somewhat distant and reserved in manner and speech. They have little or no prejudice about dealing with non-Catholic professional and business men, and are quite willing to listen to the expert without regard to his faith or creed. Whatever distrust they may now display towards architects has been born of the blunders of architects themselves or of misunderstandings or of traditions current in the clerical circle. In any gathering of clergymen, when the subject of building is brought up, one may hear many stories of the failures, the blunders and the rascalities of incompetent and dishonest architects: how Jones submitted plans for a building to cost fifty thousand, and it actually cost one hundred thousand; and Brown put up a church so defective that to keep it from falling an immense sum had to be expended; and Robinson stood in with all the contractors and made a round sum by accepting inferior material and inferior work. These are current tales, but at the same time there is no lack of praise and commendation for the architect who has been faithful and successful.

It must be acknowledged that in many instances distrust of the architect or fear of his prices has driven some clergymen into dispensing with the professional and confiding their building interest to the mason and the carpenter. The results have regularly been so unfortunate as to prevent repetition of the blunder. The clergy are naturally quite easy prey to clever schemers in the matter of building. What they know of architecture is acquired somewhat accidentally in the practical work of the mission. They find it less difficult to deal with the carpenter and the mason than with the accomplished architect, since they can put a check on the craftsman's expense before it has jumped into the thousands. Their very ignorance of architecture leads architects to the supposition that dealing with them is next to impossible, particularly when it comes to the settling of a question of taste and of principle in architecture; but this supposition is incorrect. As men of education, of some experience, of observation, influenced by their clerical associations, they know their own limits, even while not qualified to judge of the limitations of a particular architect. They are willing to learn and willing to take instruction from qualified teachers.

I repeat, therefore, that the architect holds the key to the situation, and may choose his own vantage ground. That he has not already done so, that he stands without the charmed circle, not knowing how to get in, half convinced that entrance is impossible, is his own fault. His own shyness or his ignorance of the conditions may be to blame. There are two elements in the building problem among Catholics: the standard of building, the ideal we may call it, and the priest who builds. Therefore the architect who grapples with that particular problem must ask himself two questions: what is the traditional church for Catholics, and what kind of a church does the priest desire? Upon his answer to these questions will depend his success. Let us take for discussion the second element in the problem.

The priest is the church builder among Catholics, and his wish is law. This statement suffers some modifications according to the nationality of the people, but it may be taken by the architect as a safe statement in most circumstances. Even where the priest is simply the head of an executive committee, his influence dominates. The preliminaries, before an architect is called in, usually determine the size and general character of the church, the ability and willingness of the people to undertake the structure, and the good will of the bishop of the diocese. These things made certain, the architect is asked to submit his plans, based upon the instructions from the priest. These plans are to be submitted to the bishop and his council as soon as accepted by the priest and his committee of trustees. There is no question that a priest will build as handsomely as the funds will permit; in fact, he will stretch a point and build slightly beyond his means. It is the ambition of every parish priest to have a fine, richly adorned church. When he has determined upon the figures to be paid for the new building, the architect may be absolutely certain that the priest cannot afford a penny more. His parish revenues will not provide a dollar beyond. This is a fact to be well remembered. So often has it been forgotten by architects of the past that most priests stand armed against present architects. More than one architect lost his opportunities by exceeding the first estimate, or by swallowing up in the structure the cost of adornment, so that for years the church interior stood colorless and bare, an undecorated void, an eyesore and an irritation to pastor and people.

The honest and prudent architect must therefore keep this rule in mind: never to exceed the first estimate. Moreover he must never forget that the estimate is to cover the entire cost of decorating and furnishing the church interior. It will not do to offer the plea that he forgot, or did not foresee, or underestimated; it is his business to remember, to foresee, to estimate properly; for that he is employed. The agreements between architect and pastor should be in writing always, every item should be covered, every change discussed in all its bearings, and then placed properly in the written

agreements. As a rule the priest is more than generous in his dealings with architects and builders; in consequence, when pinched by the blunders or inefficiency or dishonesty of his aids, he is apt to be more than severe. It is unnecessary to criticise this very natural consequence. I recall one priest who built the foundations of his church on the generous and confiding plan, and was successfully robbed by both architect and builders; therefore, when he arrived at the work of the superstructure, he employed a superintendent at four dollars a day to see that both architect and builder lived up to their agreements; and the necessity of this caution was proved daily in the rejection of unfit material accepted by the architect from the builder, and in other important matters.

What style of church does the average priest desire to build? That question may be answered easily by the architect from the general character of the churches in a given neighborhood. Usually a priest wants a church like some other that he has seen and admired. The clergy are imitative and conventional, but are not bound by conventions overmuch. The simple rectangle with Gothic steeple was the fashion for fifty years, until the clergy tired of its monotonous ugliness. If the priest knows nothing about architecture, he does know that he wants nave, transept, sanctuary and bell tower; and these being provided by the architect, there will be little difficulty in persuading him to accept almost any beautiful form of building. A casual examination of the churches built during the last ten years proves that the clergy have broken away from slavish imitation, and are willing to accept even novelties in form, provided that the traditions are not violated. The nationality of the priest must be considered in this matter. The English-speaking Catholics as a rule leave the style of church entirely to the priest and the bishop; the Germans have something to say in the committee which has charge of the building ; the Poles, it is said, follow the progress of the work with jealous eye from the first plan to the last stroke of the decorator's brush, and are as ready to hang the architect for failure or blunder as to score the priest for permitting it. The Germans and Poles and Italians go in for strong decoration, the others care less for color and more for the splendid form. These facts are mentioned because the priest is influenced by them, no matter what may be his preferences. In estimating therefore the cost of decoration, the architect must bear in mind that a foreign priest will spend more and an American priest less for that item. As a rule in this country the clergy are quite catholic in their tastes, quite open to new fashions, and favorable to new methods, and therefore the architect may not always find the difficulties above described awaiting him.

Of what material will the priest build? This question may also be answered by a glance at the churches already in existence. Brick, stone and wood are all represented in all their forms in combination, showing perfect freedom of thought and independence of action on that point. Tradition favors the stone, but the funds decide the question. Here the architect will never meet with any real difficulty.

How far will the priest modify tradition? The American priest is a utilitarian. He has been brought up in a school which for a long time knew nothing of architecture, because there was little need for it. All that Catholics could secure in the form of a church was a hall or a cheap structure, for which they were thankful. The church builders of the first period, which closes with the year 1850, cannot be said to have founded a tradition, or even to have continued European traditions, so various, strange and inharmonious were their temples. The second period introduced the cruciform structure in many varieties, the Romanesque, and, in the great cities, a hybrid which takes its name from its one visible external feature, the façade. The prominent feature of all Catholic churches in this country is the steeple, which seems to be the only traditional characteristic. My own conclusion is that there are few traditions for the priest to modify, and that he will be found quite flexible with regard to any that may appear. His concern is mostly with the necessities. He must have, if possible, a roomy and elegant sanctuary, a good sacristy attached, a roomy nave with a middle aisle, a comfortable vestibule, a bell tower or steeple, and a handsome exterior. Outside of these an architect will have considerable freedom in his plans. It will be necessary for him, however, to keep in mind the limitations of the priest in all directions; for the priest must work within his means, satisfy his bishop and his people, and secure respectable results to meet the criticism of his associates. If novelties are to be attempted, or novel variations of the conventional or the unaccustomed, the architect should provide the priest with arguments and illustrations that explain and justify the departure from custom. These will be repeated to parishioners, committees, associates and diocesan officials, and will prepare them for the change properly. It may seem superfluous to mention these details, but not to the architect of experience. The country is full of mournful examples illustrating their aptness. To conclude on this point the architect, who has not yet entered the Catholic field, may approach the priest with perfect confidence in his fairness, courtesy, readiness to listen and general kindliness.

The second factor in the problem which the architect has to deal with is the ideal church building. Tradition has established its essential form firmly, so firmly that there can be no doubts about it. All architects are acquainted with it, though various names are given to it, according to the popular variations of its substantial features. These variations are the natural result of environment. Every age has added to their number and each tribe has produced its own forms. It is not unreasonable to expect that the new world shall add its own variety, based on the new needs and the new circumstances. For the watchword of the architect during this century will have to be *adaptation*. As was pointed out in an earlier paragraph, the immigrants settling here will bring to the building of their churches their best and worst traditions, of which some will go with the new situation, and others will clash and be set aside. The architect will have much to say, if he chooses, in accepting the useful and beautiful and rejecting the superfluous.

It is not at all certain that the average architect is trained to meet the situation as it exists among Catholics.

The ideals of Protestants and Catholics in the matter of churches began to differ radically late in the last century. With the former the church building has taken on more and more the character of an assembly-room, in which the speaker and the hearers, the seeing and hearing, are of the utmost consequence. While the Catholics have not remained indifferent to the seeing and the hearing, these ideas have not at all affected the traditional features of their churches. With them the church must always bear the characteristics of the temple: prominent sanctuary and beautiful altar, space for the carrying out of the ritual and for the administration of the sacraments. The banishment of the temple characteristics in so many modern churches is quite repugnant to the religious sentiment of Catholics, as all architects know. Yet while the idea of the temple prevails with them, they have little thought of making every church they build an architectural monument like a cathedral. Some architects are possessed of this inaccurate impression. One asked me in writing, admitting that a cathedral church is an architectural monument, how far might that idea be modified in relation to a parish church, and how far might an architect go in sacrificing it to considerations of utility.

To my mind this question has no practical bearing on our circumstances. In Europe it might have. The parish church in the United States is no longer thought of as an architectural monument. Formerly the clergy who set out to build churches really built cathedrals when the revenues of their parishes enabled them to do so with ease. However, the policy of the bishops for many years has been to multiply parishes with a more and more limited membership. This policy has not only increased the number of smaller churches, it has also driven out of existence the parish cathedral. Hereafter the parish church will be of the simple character befitting its uses. As has already been said, the stately churches of the past era will not be imitated, but the less brilliant and more tasteful parish churches will be multiplied. Of course the large and wealthy parishes will continue to build splendidly as of old, the religious communities will adhere to their traditions in this matter, and their buildings will suffer no departure from tradition except in such utilities as lighting, heating, ventilating and pew-fitting. They will always strive for the characteristics of the architectural monument.

The parish church, on the contrary, will adapt itself more freely to circumstance, all the more freely that its size will have been diminished along with its congregations. With the Catholic the idea of the temple is based on the idea of the Sacrifice of the Mass. The temple is a building which protects an altar, around which gather priest and people to offer up sacrifice to God. The central point of the temple, from which all the other parts radiate, is therefore the sanctuary. Next to the sanctuary in importance is the nave or auditorium, wherein the people worship. Sanctuary and nave are the essential parts of the Catholic temple. The capable architect must therefore begin his plans from these two points. The sanctuary must be visible from all parts of the nave, therefore elevated, lightsome, noble in its lines, and, as the scene of many important ceremonies, it must be spacious, its outer rail should extend across the entire church, and the approaches to it should be of generous width. The space between the rail of the sanctuary and the first pews should never be stinted. For the people this is the place of many ceremonies. They crowd to the rail for the Sunday communion, the children receive here the sacraments of the Eucharist and Confirmation, the bridal pair are married at the gate of the sanctuary, the dead are brought to it for the last rites. The temple is the home of the sacraments. Somewhere in the confines of the auditorium should be the baptistery, where baptism is publicly administered, and the confessionals. The vestibule is not only a means of entrance and exit, it is also the scene of many ceremonies. In my opinion that architect would make no mistake who would take his place in the sanctuary and draw the lines of his church with an eye on the points just enumerated: spacious sanctuary, roomy aisles and vestibules, baptistery and confessionals.

One might call the above paragraph commonplace unless the blunders made in these matters were known by experience; for example, roomy aisles and no space for confessional or baptistery; a fine sanctuary, with no space at or in front of the railing; sanctuary and nave out of proportion with each other, so that often the former looked like an accidental hole in the wall of the nave. Of secondary consideration, but not to be forgotten, are the utilities, such as the pews, the pulpit and the sacristy; the details of the nave in the matter of pillars, windows and the like, and the question of a basement for heating purposes and also for church assemblies. The pews are so much in use among Catholics that at least they should be comfortable and avoid the blunder of cramping the entire congregation. The pulpit is always a vexed question, for different reasons. A small church does not need a pulpit, a medium church seems to offer no space for a fixed pulpit, and the movable pulpit is unpopular, and a large church must face the problem of acoustics with any sort of pulpit. For the church of medium size a sanctuary with plenty of space close to the rail will provide room for a small pulpit. The question is one to be fully discussed with the priest, and careful experiments should be made. The pillars often obstruct the view for a number of people, but that fact need not disturb the architect. Their number is small in the average church, eight or ten at most, and perhaps fifty people may temporarily lose sight of the altar on account of them. This deprivation can be borne. The sacristy is of varying importance according to the circumstances. In many places it becomes the winter chapel for the congregation and in others the week-day chapel besides; in country churches it may contain the baptistery and the confessionals. In most churches it is simply the sacristy, where the sacred vestments are kept and where the priest prepares for the Mass. As it adds very much to the comfort of the clergy, the architect does well to discuss all the details, exit and entrance, heating and lighting, and the uses to which it may be put in the future. The basement has become an important feature of the modern parish church, particularly in the large cities, but the clergy have no love for it except on grounds of economy. It will always be kept subordinate in Catholic churches, as much underground as possible, since it is a temporary expedient; therefore the architect will always be on the safe side if in the general plan of the church the basement is made as inconspicuous as possible.

These general statements will suffer many modifications when the architect comes to deal with a particular priest and a certain set of circumstances. For the sake of economy a priest will sacrifice the spaciousness of sanctuary and aisle, and leave baptistery and confessional to shift as they may. But with particular problems of course we cannot deal in this article. The architect, having made his plans from the standpoint just described, may proceed to consider the exterior of the temple both with regard to the interior and to the particular style of architecture demanded. An examination of the Catholic churches of the country proves, I think, that the clergy are not attached to any particular form nor to any particular material. Either the Gothic or the Romanesque would be their style, where they might choose. The main problem with them is always a church large enough to hold the people. It is always an easy matter for the architect to influence them within the limits of the estimate. If, on the whole, they know little of the traditional architecture, they possess considerable taste, and have usually enjoyed some experience. As a rule they seek convenience and comfort for the church interior, and both beauty and dignity for the exterior. The steeple and the tower are favorite features, the noble façade, the spacious entrance and the dignified windows. In former times poverty allowed them only the luxury of steeple or tower; in our day a measure of prosperity has introduced numerous luxuries.

The exterior of the church ought surely on general principles to express the interior aptly. At this very point the clergy and the architects together have scored their most serious failures. The great majority of the Catholic churches in the United States have little external expression beyond that of a pile of brick, stone or lumber emphasized by a steeple. Certainly they express nothing of the spiritual beauty that reigns within. Whoever may be to blame for these unsightly structures, no repetition of them should be permitted, and none is necessary. The smallest church can be built beautifully, and the clergy are willing to make sacrifices to secure that beauty. I recall a town which had three churches, of which the poorest and cheapest was the most beautiful. It was not the Catholic church, but every priest that saw the little church expressed the wish that such simple and effective beauty could be oftener expressed in our temples. As little as they might have known about architecture, their taste was correct and sure enough to recognize beauty of form when they saw it. It looks to me as if architects do not appeal to this sense of beauty; or else they make their suggestions so expensive that the clergy recoil. All that can be said here about the exterior of the church is this: the priest and the architect should be able to secure, after ample examination of styles and plans, just what the circumstances need. There are no binding traditions for the parish church except, the simplest of all, that the building look like a true temple of God when finished, and be as far as possible from the appearance of an auditorium. Whatever style of architecture be adopted, let it be consistent throughout: let there be no experiments and no composites. A successful experiment gets no criticism, but most experiments are failures; and as for composites, only genius can get anything beautiful out of them.

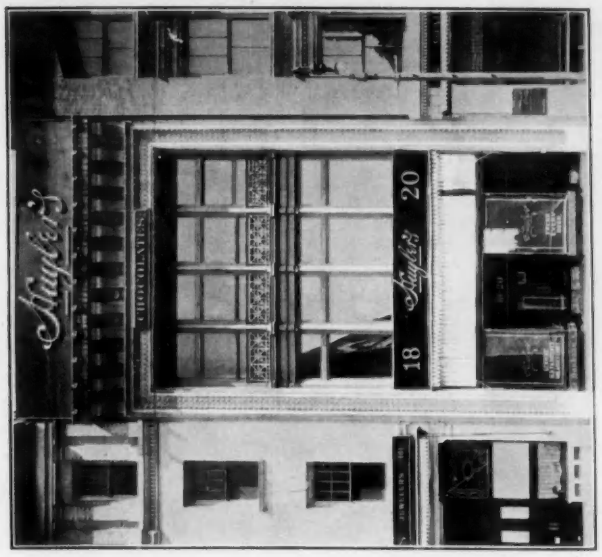
The Rebuilding of Baltimore.

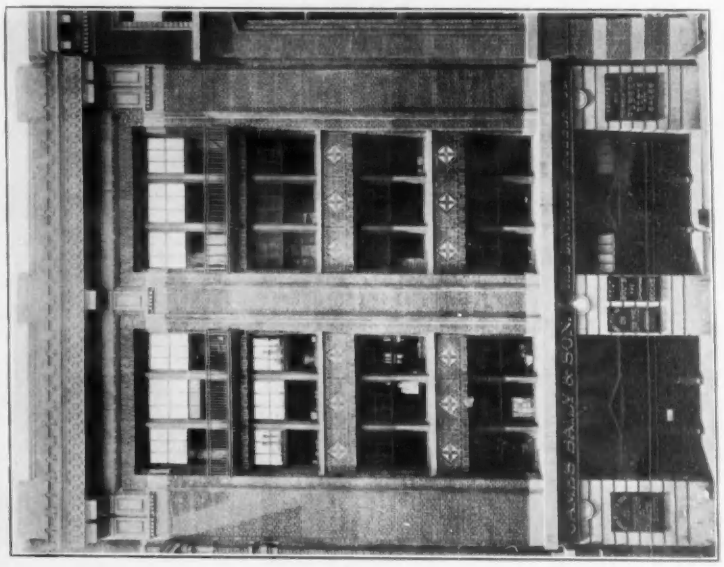
WHAT HAS BEEN DONE IN ONE YEAR.

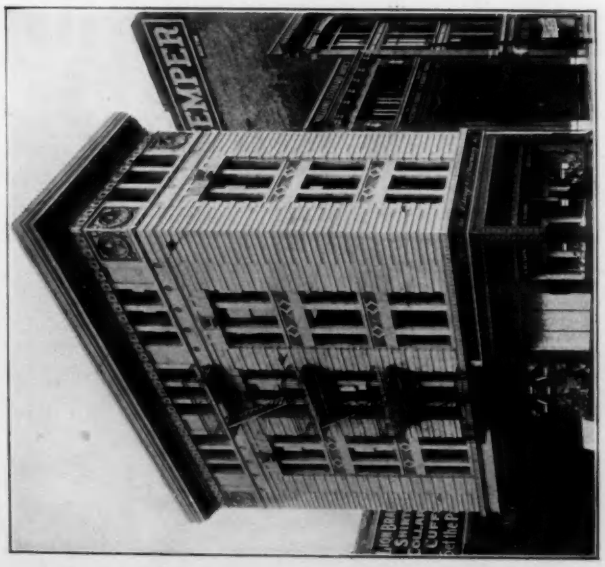
THE old saying, "It's an ill wind that blows nobody some good," may aptly be applied to the results occasioned by the Baltimore fire. The same wind that carried destruction in its path developed new conditions and created new opportunities, which, if seized at the moment, would have made Baltimore a model city. In some cases advantage of these opportunities was taken; but in others they were combated and wholly disregarded, because the prevailing ideas of reconstruction were based upon what had been, not what might be. The future was considered, but not upon the scale the situation demanded. Fearing a prohibitive tax rate, the people adopted only in part the schemes for municipal betterment that were suggested. The chance was offered to lay out and construct the burned area upon magnificent lines, but the people failed to comprehend the results that would accrue, or, comprehending, failed to profit by their knowledge, and the opportunity passed. That these fears of a prohibitive tax rate were without foundation has been proven, for dilapidated sttuctures which once existed have given place to handsome modern buildings, causing an enormous increase in the taxable basis and consequently a considerable reduction in the tax rate.

But despite the failure to embrace the opportunity for grand schemes of municipal improvement, a new spirit governs building in Baltimore. Formerly business had been conducted under conditions which retard rather than advance the progress of a large city, such as narrow and congested streets, some with heavy grades, and dilapidated structures unequipped with modern facilities for the proper handling of the city's trade. A system of conservatism seemed to govern all methods of procedure. But ere the smoke had rolled away the city had taken the first step towards progress and "Greater Baltimore." Then came the revival,—the renaissance. A new spirit was born. The citizen was awakened from his stupor and was ready to advance; the refusal to accept the tender of outside aid illustrates the spirit which was to govern the future. This same enthusiasm now prevails and invades all lines of work. The citizen is conscious of his needs, and when he is thoroughly aroused there can only be one result. It means a desire for improved conditions, such as wider and better paved streets and better architecture. The desire for something better must necessarily influence the means to produce the end.

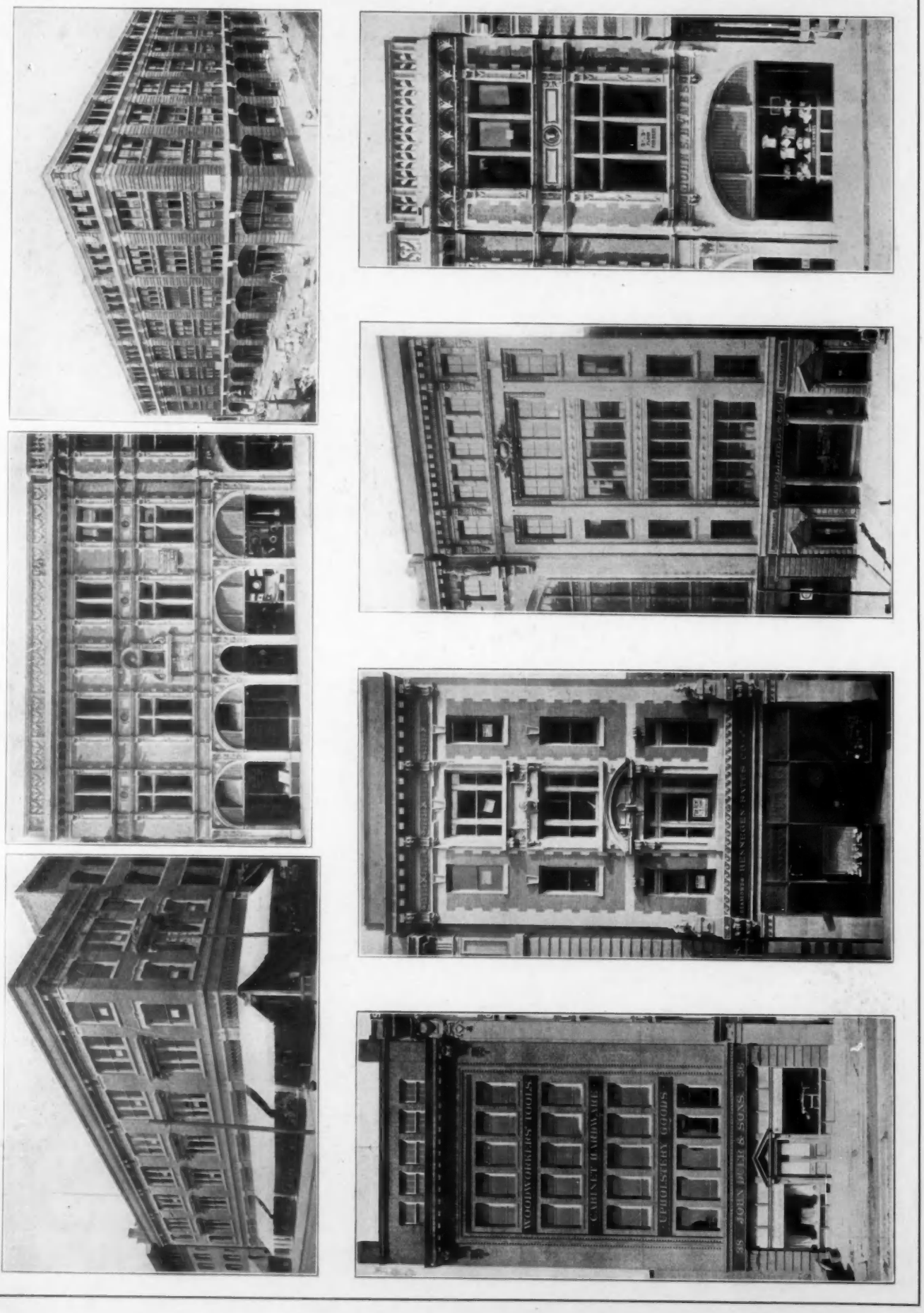
The appointment of an Emergency Committee several days after the fire was the first step. The committee was composed of men of recognized business ability; but it is greatly to be regretted that in the selection of the members not enough recognition was given the architect and engineer, the very men upon whom depended the success and proper execution of the various schemes submitted for adoption. This Emergency Committee was appointed for the purpose of considering the problems involved in the improvement and rebuilding of the burned area, and continued in office until an enabling act could be passed by the legislature and a permanent commission formed. The state legislature then in session soon passed this enabling act, and the Burnt District Commission was named just a month after the fire. The Commission was



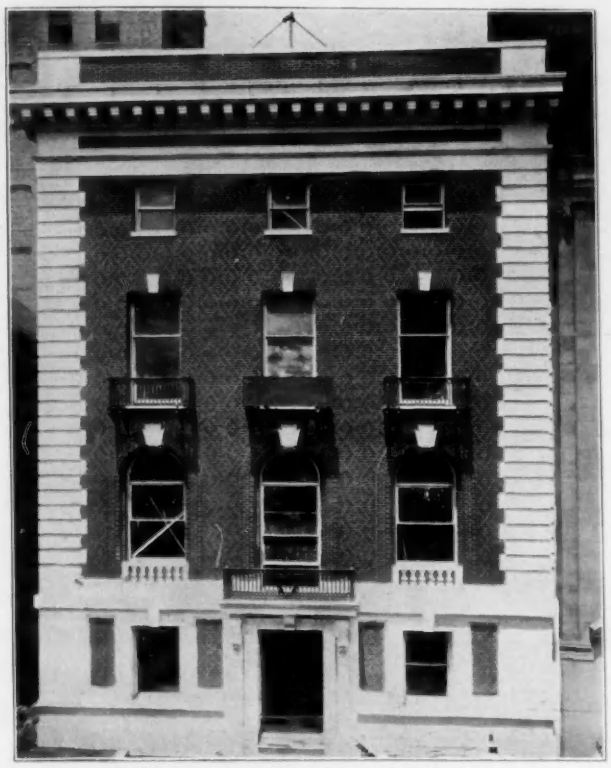




A GROUP OF NEW STORE AND LOFT BUILDINGS. Sperry, York & Sawyer, Architects.

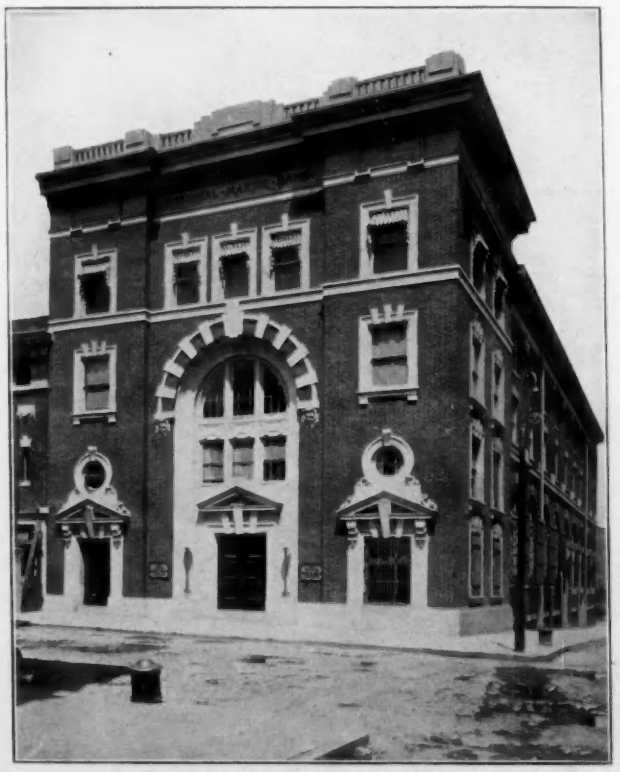


A GROUP OF NEW STORE AND LOFT BUILDINGS. Wyatt & Nölting, Architects.



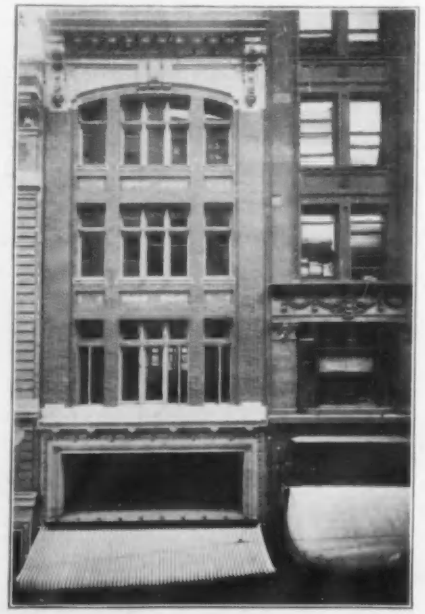
MERCHANTS CLUB. York & Sawyer, Architects.

KIRWAN'S HOTEL, Hale & Morse, Architects.



NATIONAL MARINE BANK. E. H. Glidden, Architect.

LANAHAN BUILDING. Simonson & Pietsch, Architects.



A GROUP OF NEW STORE AND LOFT BUILDINGS. Archer & Allen, Architects.

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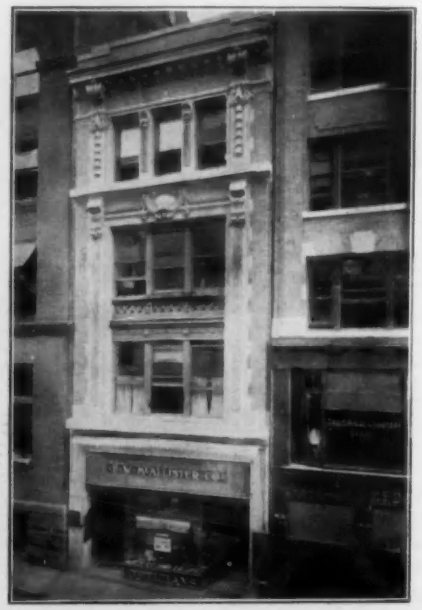
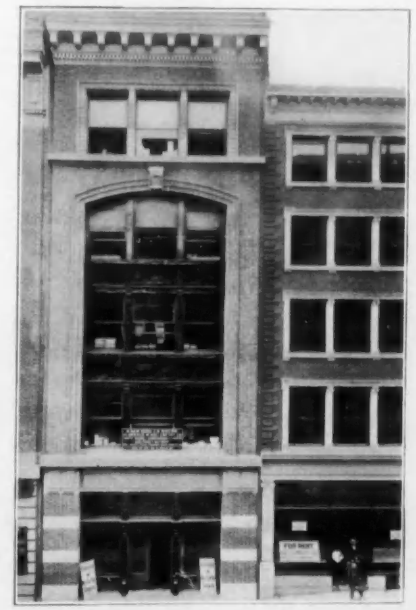


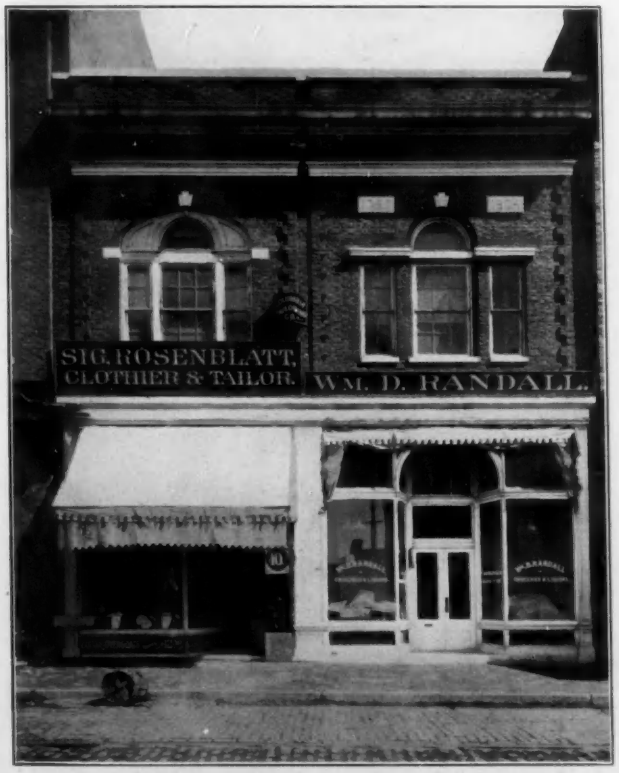
TWO NEW STORE AND LOFT BUILDINGS.
Ellicott & Emmart, Architects.



TWO NEW STORE AND LOFT BUILDINGS.
Owens & Sisco, Architects.

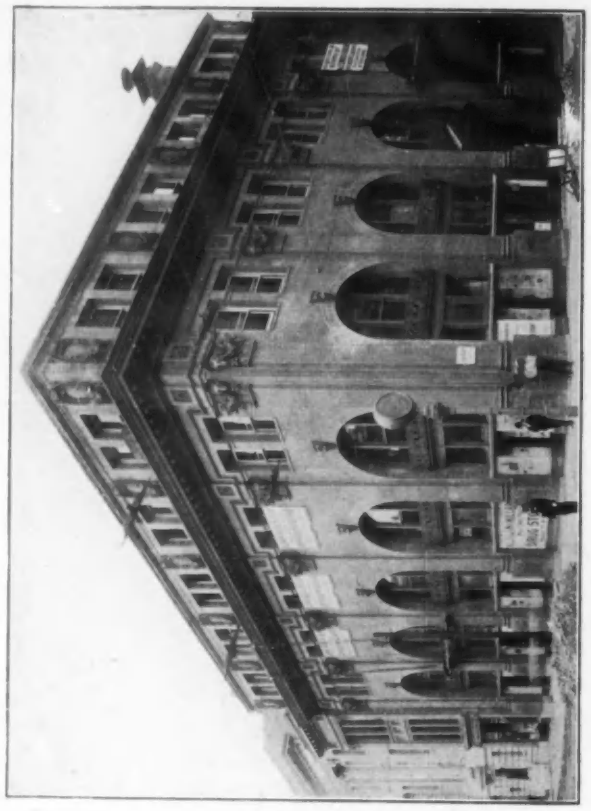
J. APPLETON WILSON, ARCHITECT.

PARKER & THOMAS, ARCHITECTS.



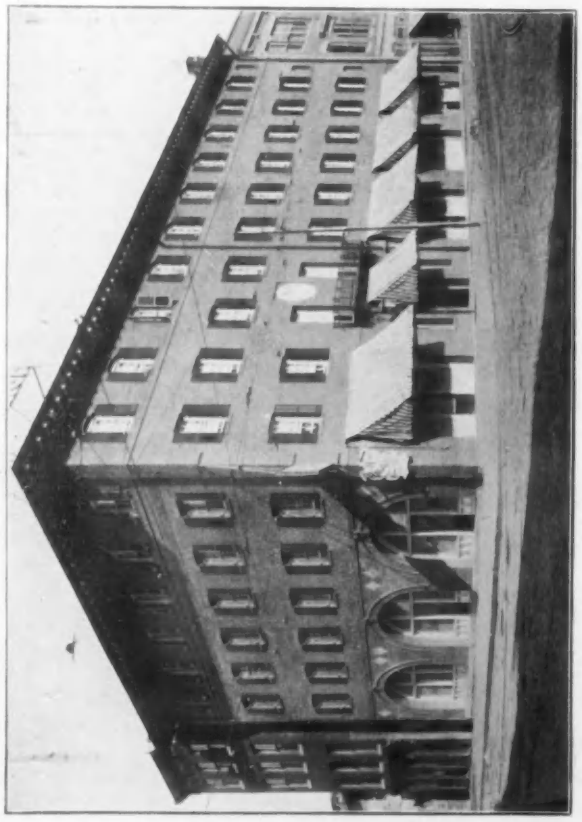
H. S. MAGRUDER, ARCHITECT.

TORMEY & LEACH, ARCHITECTS.

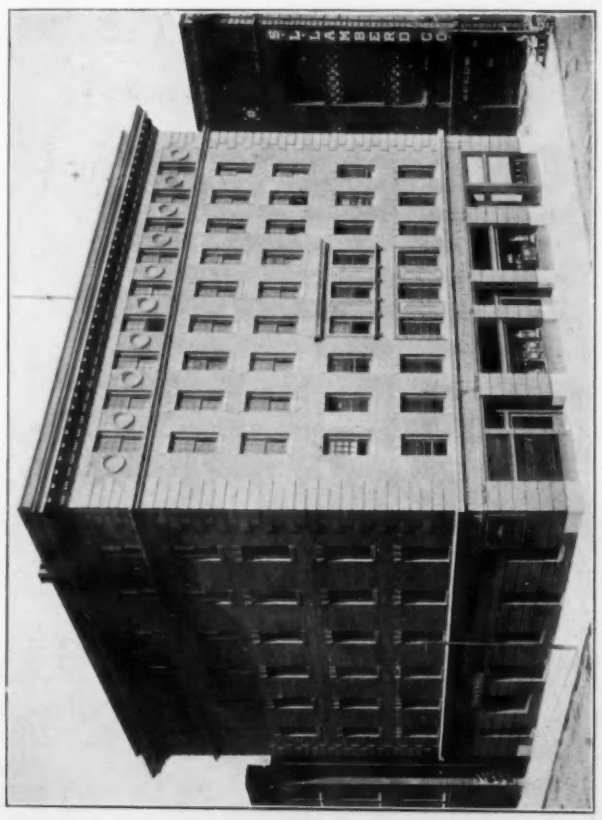


ABELL BUILDING. Delano & Aldrich, Architects.

RIDDLEMOSER BUILDING. Sperry, York & Sawyer, Architects.



HOTEL RALEIGH. Delano & Aldrich, Architects.



BIBB BUILDING. Owens & Sisco, Architects.

given power to acquire, either by private purchase or by condemnation proceedings, whatever property was necessary for the purpose of widening or extending the streets. The Emergency Committee had carefully considered the conditions and had recommended a change in the widths and in the grades of a number of streets throughout the burned area. The Burnt District Commission practically adopted the recommendations presented by this committee. This portion of their work has been practically completed, and there has been added to the former street area within the burnt district more than 348,000 square feet, or about eight acres.

There was a change of grade in nearly all the streets within the burned area, in some instances only slight, but in others a much more radical one; and a delay in establishing these grades meant a delay to all building operations. During the month following the fire a commission to revise the building laws was appointed, and adopted recommendations which were recognized as being absolutely

necessary in the reconstruction of the burned area. Until the adoption of these suggestions and the establishment of the proper street grades, the building department refused to issue permits, so that a delay of from two to three months resulted.

When matters were allowed to proceed there came the demands for hurried work. This necessarily meant a hurried and inadequate study of design, which many of the finished buildings show. The less time required to complete one commission the greater the number of commissions it would be possible to complete within a certain period; the greater the number of commissions the greater the revenue. This did not follow in all cases, however, for owing to the great influx of talent the schedule of charges adopted by the American Institute of Architects was not strictly followed; the client demanded cut rates, and the finished building was a bargain. The client paid for it and was happy, but that did not make it good architecture, although it might be better than the building that formerly occupied the site.

The general public does not properly appreciate the best in architecture. A beautiful building may be simply a structure that satisfies; its architecture does not appeal to them. Though the general public is so unappreciative, the critic is not. Good criticism promotes a healthful condition, though so few are willing to receive it.

In the haste to rebuild after the fire art weakened and commercialism triumphed, and this unhappy condition became an important governing factor in regulating design and construction. There is no disputing the fact that the materials which best stood the fire test were the products of burnt clay. One would suppose that the success of these materials in withstanding such a severe test would recommend them to a more general use, especially terra cotta for ornamentation. The client appreciates the lesser expense of this material as compared with others and recognizes its ornamental possibilities, yet when he learns that he must wait for six or eight weeks for his work to be executed he objects to the delay and demands that terra cotta be eliminated and galvanized iron be substituted in its place. Thus once more does commercialism triumph and art suffer.

However, the fire has been a tremendous benefit to the city. This assertion may seem strange in view of the loss that individuals suffered. But the benefit has accrued to the city as a whole in the confidence the citizens have in its future, and in the increased demand for ownership of real estate, with the accompanying enhancement in values. This condition does not exist in the burned area alone, but has extended to the limits of the city and into the surrounding suburbs.

The area of the district over which the fire burned is approximately one hundred and forty acres, and about fourteen hundred buildings were destroyed. About four hundred buildings had been completed by July 1, 1905, with fifty additional ones in course of construction. This has practically been accomplished within one year. The new buildings are superior to the old in appearance, construction and equipment, and have had incorporated into them such improvements as have been developed in other cities in recent years.

Tile and Faience Work in France. I.

BY JEAN SCHOPFER.

IN an article with illustrations reproducing merely the designs, without the coloring of the completed and finished work, it is perhaps impossible to indicate the great variety and possible diversity in color and texture latent in the use of decorative tiles. Yet the fact is beyond dispute that, in an age when color in architecture seemed destined to perish and disappear, tiles brought a brightening and rejuvenating influence into the art of building. No matter what their color, be it pale cream, bright yellow or flaring red, yet it saves us from the terrible monotony of sad-colored stone.

Among the countries which have shown the most progress in experimenting and producing new ideas in the different ways of employing materials of clay, France demands an important position, not alone from her extreme modernity, — so extreme, eccentric and bizarre, in some instances, as to cry aloud for notice, — but she has

CAFÉ RICHE, SHOWING EXTERIOR DECORATION WITH ENAMELED TILES.

also struck a more conservative note that is as properly her own, while the considerable progress of decorative and constructive art that she has realized in this industry is undeniably deserving of careful attention. From the fact that many of her most original and best trained artists have devoted their time to experimenting in various treatments of different materials for many especial and individual purposes, then it may be truly said that France excels; and however notable may appear kindred instances that, as a part of the same movement, have developed in Belgium, Germany, Austria and Italy, it is yet essential for a proper understanding of the field to consult the best works of modern French designers,

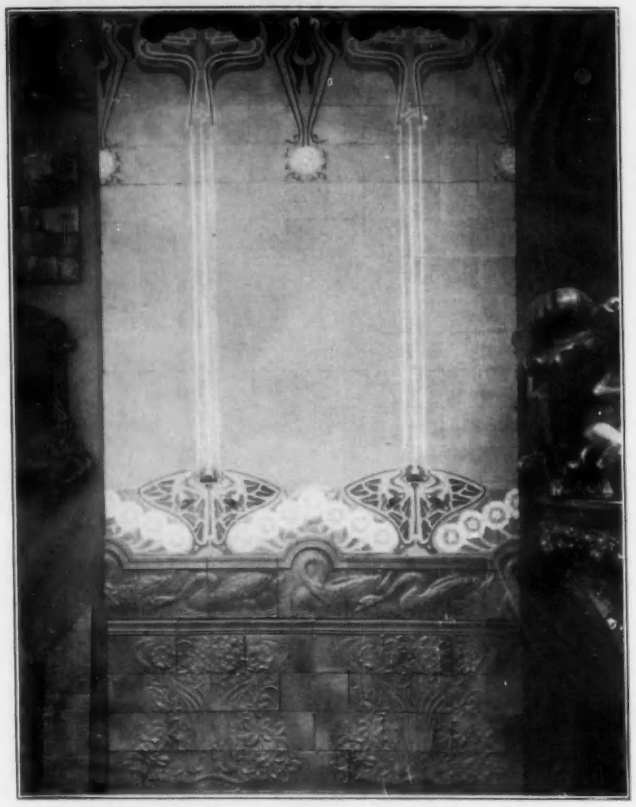
It is but a short time, comparatively speaking, since artists first discovered that enameled tiles were susceptible of being applied architecturally in a much greater variety of ways than they had before realized. They were already being used as facings for bathrooms, in public corridors, halls and lavatories, for basements,

BAKER'S SHOP, SHOWING EXTERIOR TREATED WITH ENAMELED TILES.

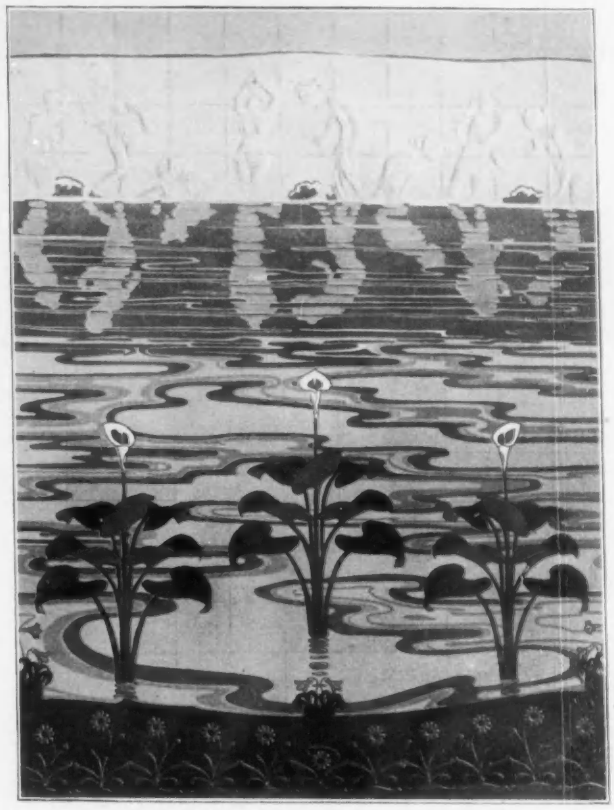
"subways," and even occasionally on interior light wells. It was but seldom, however, that they were placed on the outside of the building, and then only in slightly varying tones, used sometimes to enrich a frieze or to add a few notes of color around the framework of a window. And yet what could seem simpler and more inevitable? Here was a material of clay that it was easy to bake and prepare, that keeps its enamel surface perfectly, and consequently is susceptible to all of the numerous aspects that color and drawing place at the command of the designer. And besides all this being, in the process of its manufacture, baked and enameled in the furnace, the material offers great resistance to the action of the air, dust and rain, and the long exposure to dampness that discolor and affect other less well protected materials.

Perhaps the broader beginnings of this movement may be credited to the Exposition of 1899, when it is indisputable that the general public were first given an opportunity of realizing the different possible applications of various forms of architectural ceramics. The Palaces of the Champ de Mars — the Palace of Fine Arts and Palace of Liberal Arts — were remarkable for the almost exclusive use of clay materials. It is true that the clay was united to a framework of iron and was actually employed but to fill up, overlap and enclose, as with a garment, this skeleton of iron and steel; but who will claim that these palaces were not infinitely

APOTHECARY SHOP FRONT, TREATED IN ENAMELED TILES.

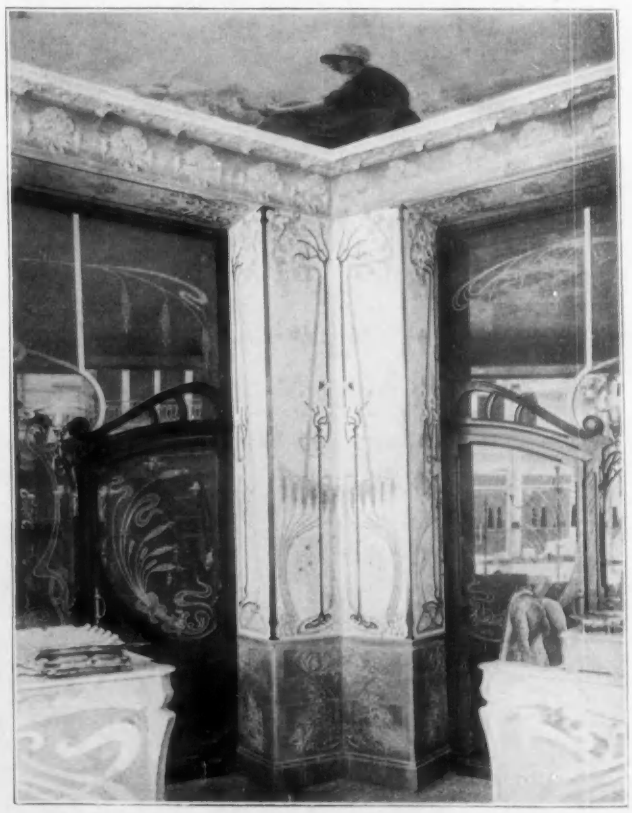


DECORATIVE PANEL TREATMENT WITH ENAMELED TILES.

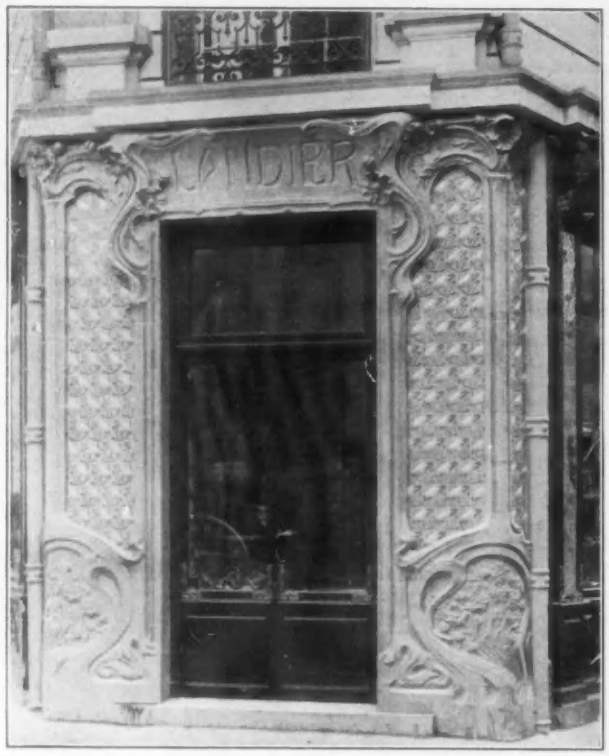


DECORATION IN ENAMELED TILES FOR BATHROOM BY A. CHARPENTIER AND F. AUBERT.

SHOP INTERIOR, SHOWING DECORATIVE TREATMENT WITH ENAMELED TILES.



INTERIOR BAKER'S SHOP, SHOWING TREATMENT WITH ENAMELED TILES.



SHOP FRONT, SHOWING TREATMENT WITH ENAMELED TILES.

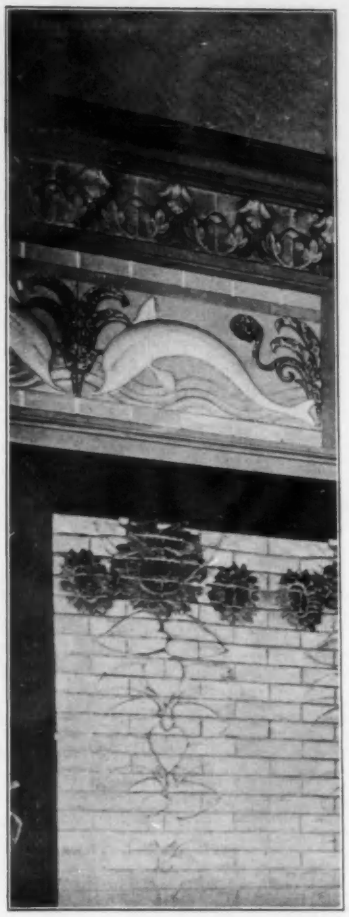
superior architecturally and from the decorative point of view, and as to the quality of the materials employed, to the deplorable buildings — so-called "de fantaisie" — that were erected upon the same Champ de Mars in 1900?

At about the time of the Exposition of 1900 there appeared upon one of the principal boulevards of Paris a café whose exterior ornamentation in enameled tiles struck a new note in the decoration of city façadès. It was the Café Riche. From the illustration it is possible for us to realize to-day something of the intentions of the architect, M. Ballu, and of the designer of the colored faience mural decoration, M. Forain. Placed on the outside of a popular restaurant, they represented different scenes of Parisian life, all treated with a very clear and happy decorative effect. So at last there was shown on one of the most frequented thoroughfares of Paris a style of decoration pleasant to the eye, very modern, quite new and entirely due to ceramic.

This façade was destroyed, but the effect of the lesson remained, and other show fronts in enamel tiles soon resulted. Sometimes indeed they evidenced too vivid a taste for the fancy of what is variously called "L'Art Nouveau" or "Modern Style," but they were always alert, gay, clear, fresh and clean in color and obtained a real success as a means of advertising, whatever other questions of propriety and taste they may have raised. And now, the fad once started, Paris provides every day a new example of a brilliantly colored and ornamented tile shop front.

SHOP INTERIOR, SHOWING DECORATIVE TREATMENT WITH ENAMELED TILES.

It seems possible that enamel tiles shall prove to be the eventual solution to the problem of the discoloration and deterioration of most of our historic building materials when exposed to the contaminated atmosphere of our large cities. They are affected neither by dust nor by damp, and if soiled there surfaces are easily cleaned with the aid of a towel and a little fresh water. As the last few years have brought this material into more general use it has received more and more careful and intelligent attention from various decorative designers to whom the variety and newness of the problem have appealed, and already enough has been done to prove that it is capable of being treated in such a way as to produce an art that may be both original, new and becomingly adapted to the problem of the shop front and city street façade.



EXAMPLE OF PANEL AND FRIEZE WORK IN TILES.

Among the many examples which have been realized in the different sections of Paris there is illustrated the shop of a baker and confectioner, situated in the east end of the city, in a quarter inhabited principally by the working class. Sociologists may be pleased to note the fact that an instance of art so modern and cheerful is thus found in a popular working quarter of the capital. On the exterior, slabs of plain, dead enamel form the base

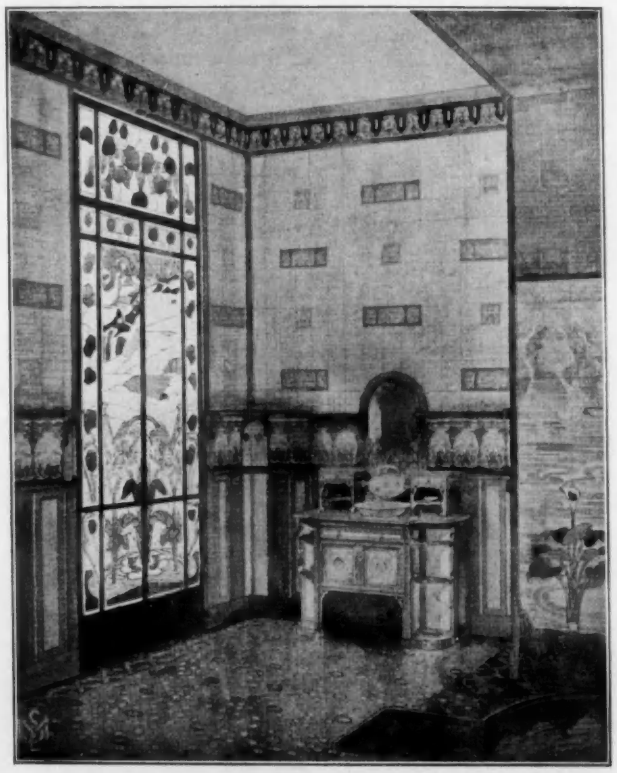
course. Upon these are placed the brilliantly enameled portion of the upper part of decoration, which represent subjects suggested by the various processes used in connection with the making of bread. The coloring is fresh and clear, making a most pleasant change from the ordinary and monotonously toned conventional shop front.

"LES BOULANGERS," BY A. CHARPENTIER.

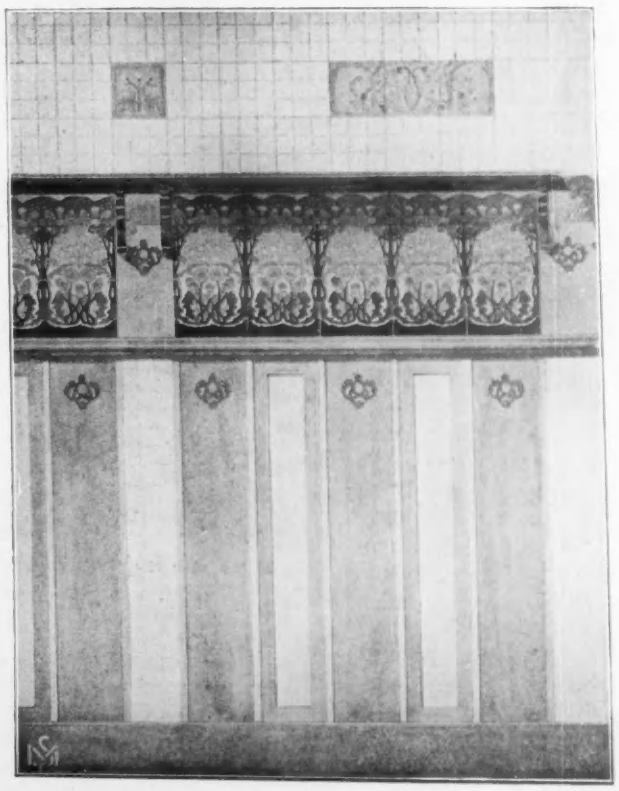
The interior has also been decorated entirely with enamel tiles. Here certainly no one can question the exceptional desirability of this material. Whereas wood, stone and marble, along with most other materials, present a surface that is porous and therefore impossible to keep thoroughly clean, it must be remembered that on this highly glazed and polished material it is quite impossible for any germ or dirt to obtain a permanent lodgment, and it is only necessary to give some care and attention to the necessary joints which is decorated with various paintings, by tiles that are coving and concave in section. As a whole it presents really the most modern, cheerful and prettiest baker's shop that could be imagined, and throughout it all is maintained a note that is most modern in style. The principal decorative motive is formed by the wheat ear, sometimes twisted and conventionally malformed in outline. Whether or not the detail of this decoration appeals to one, it cannot but be allowed that the *ensemble* is gay, brilliant and absolutely clean ; and that it constitutes a real progress beyond the shops next door, typical instances of the shop of bygone days.

This style, somewhat more extreme in treatment, animates another shop front, that of a chemist in the west end of Paris, albeit the coloring is more soberly conceived.

A second baker's shop is shown and is in turn followed



DECORATION IN ENAMELED TILES FOR A BATHROOM BY E. M. SIMAS.



DECORATION IN ENAMELED TILES FOR A BATHROOM BY BY E. M. SIMAS.

to make the entire interior surface of such a room antiseptic and thoroughly sanitary. Not only this, but the light colors in which this material is susceptible of treatment are cheerful, pleasant and cleanly looking under all conditions of weather, lighting or surroundings.

The floor of this shop is formed by tiles of heavier colors ; the walls have large panels of enamel slabs, while the frieze unites both walls and ceiling, the latter of by two other views of shop interiors, which variously indicate what can be done by the new method of employing enameled tiles for the exterior and interior decoration of shops.

To indicate in what other directions it is possible to employ and use this material, several other illustrations are here included. As instances of architectural decoration in ceramics they are certainly of indisputable value.

Here, for example, is illustrated a very handsome chimney-piece, planned by one of the best Parisian architects, now dead, Paul Sedille, executed in tiles by the aid of terra cotta. All of the decoration has been suggested from the various elements that nature offers us in winter. The family is shown gathered around the fire, and above the spirit of the home watches over it. Another illustration shows the use of this material for walled surface decoration that is of further interest in this discussion of the subject.

In collaboration with M. Aubert, M. Alexandre Charpentier has designed a wall decoration for a bathroom that has been executed in enamel tiles. This work is carried out in a combination of yellows and greens, blues and pinks, that make a color composition at once refreshingly clean and pleasantly warm and light in tone. At the base of the wall appears a conventionalized border of lilies, behind which a stretch of water shimmers off to the frieze of female figures delicately modeled in relief by M. Charpentier, and the whole ends in a blue-toned sky that may be continued to an indefinite height.

This wall treatment has been utilized in a notable modern bathroom designed by E. M. Simas and constructed in the country house of M. Laurens. The bath basin itself is set into the floor of the room, and recessed into a niche around the walls of which this decoration has been employed. In this bath the floor and tub are of mosaic and the walls are paneled to a certain height with sycamore and alder wood panels, occasionally broken by pilasters of glazed tiles supporting the ornamental faience frieze, above which the walls are covered with cream white tiles.

A CHIMNEY-PIECE, EXECUTED IN ENAMELED TILES.
Paul Sedille, Architect.

M. Charpentier, by his essay into the field of glazed earthenware made some time ago, and entitled "Les Boulangers," obtained much notice and comment for a work that was in some ways the most remarkable piece of sculpture of that year. This design was executed by M. Emile Muller in enameled tiles and represents a group of three figures engaged in baking and manufacturing "the staff of life." The coloring was both subdued and strong, as the most brilliant of reds and greens were more or less overcast by the grayish blue tone of the glaze that in part neutralized the effect of the whole panel and did something to tone down the real brilliance of the stronger coloring.

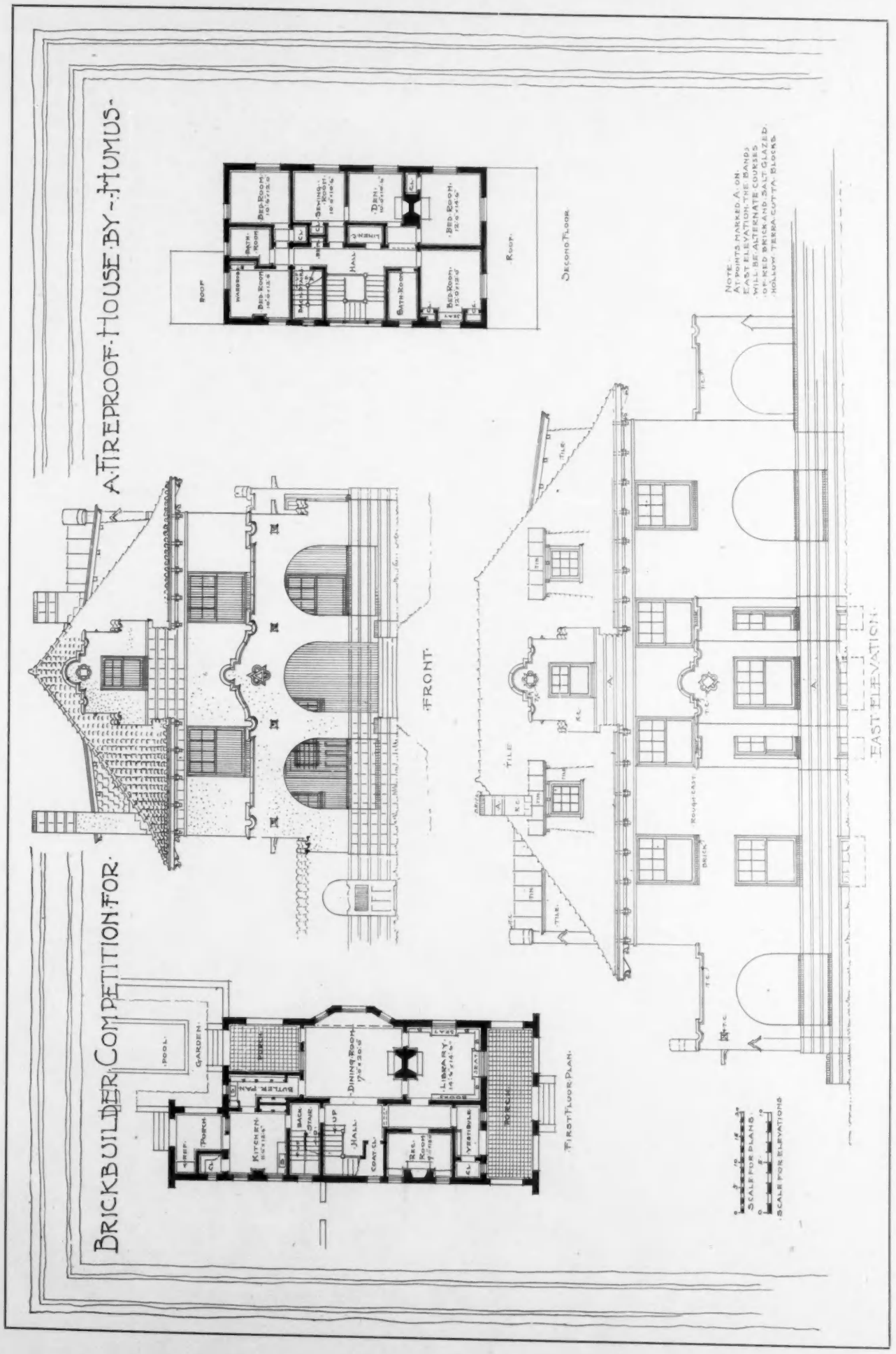
These illustrations should evidence the certainty that there is descending upon us an interesting revival entirely due to a judicious and exclusive use of glazed clay materials, and, from the natural further development of this new industry, we may expect no less than a most agreeable change in the aspect of our streets.

"Ennui was born one day of Uniformity," the proverb says, and it certainly seems possible that we should have perished of ennui or spleen had not ceramic come to the rescue and saved us. But it is not only in shop fronts that it proclaims its usefulness, it is preparing a much deeper revolution. Clay is susceptible of more than one transformation; under a new form, stoneware ceramic, or sharp-fire clay, it will give to architecture an admirable substance that has been hitherto unknown. In a following article an opportunity will be given to study it in its already numerous manifestations.

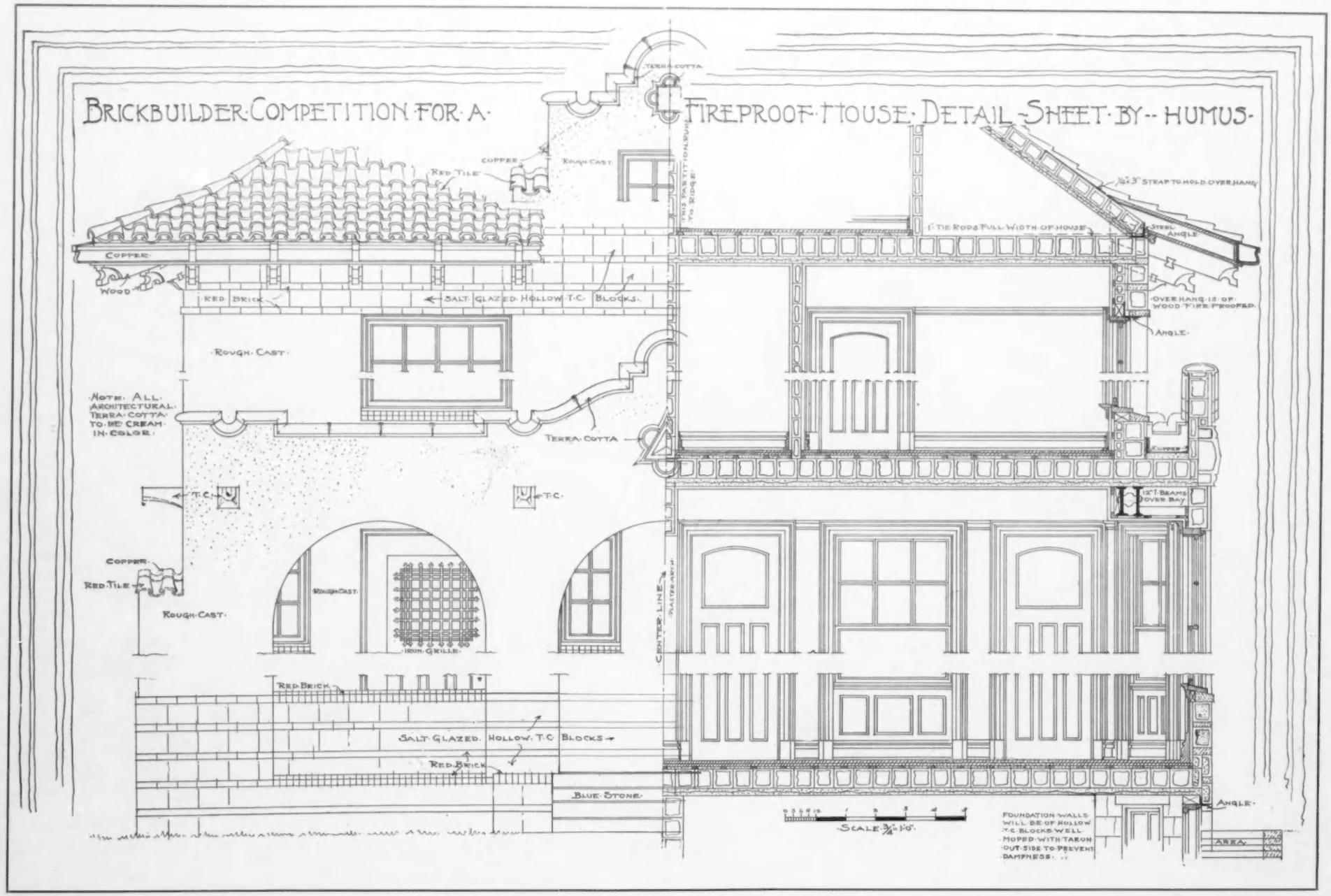
A TEST OF GOOD ART.

THE new art movement, which has reached such large proportions in Europe and has found so many ardent advocates in this country, is in principle a protest against the acceptance of tradition in architecture as a guide or inspiration for modern work. Its advocates are most strenuous non-conformists. That they include among their number some of the most brilliant minds and that some of the most original creative work which we have seen is due to their talents is unquestioned, but at the same time the number of the adherents new art has won in this country is not a large one.

Our architectural expression, as a whole, becomes year by year more academic rather than less, and tends more with each generation to follow what the non-conformists style blind tradition. If the test of any art movement is in its continued acceptance through a series of years, we doubt whether the new movement will ever occupy a serious position. The styles of architecture derived from classic antiquity have held their own now for nearly twenty-five centuries in an almost uninterrupted growth and development. We can find numerous cases where whole streets, if not whole cities, have been built up in styles allied to the Italian Renaissance without degenerating into mere dryness nor branching out into futile eccentricities, but preserving a dignified and monumental *ensemble*. We question very much whether the most ardent advocates of new art would be satisfied to see even one street in any city entirely given up to the odd creations which are classed under this name. So long as the new art is a protest, so long as it is practised only by the talented few, it is interesting and often instructive, but to carry it to its illogical conclusion and apply it to a whole street or city would be to demonstrate how insufficient it is to satisfy as compared with the more studied and rational work, which has had the sanction of centuries.



FIREPROOF HOUSE COMPETITION. MENTION DESIGN. SUBMITTED BY W. PELL PULIS, BOSTON.



FIREPROOF HOUSE COMPETITION. DETAILS BY W. PELL PULIS.

Editorial Comment and Selected Miscellany

CHEAP COTTAGE COMPETITION, LETCHWORTH, ENGLAND.

FOR some time English philanthropists and architects have been interested in the problem of securing better houses for the poor, not only with improved sanitary conditions, but also of greater architectural merit. Much practical information bearing on this question has been obtained by the competition exhibition at Letchworth of model cheap houses that are to remain permanently in their present location.

Great interest in this novel exhibition has been aroused, not merely among philanthropists, but also among architects and builders, and many prizes are offered to secure varied types and designs of inexpensive but well-equipped dwellings. The primary object of the competition is to determine what can be done in the construction of a laborer's house costing not more than $750, and a prize of $500 is offered for the best building. The specifications for this class called for a detached cottage, containing a living room, a scullery (sink room) or kitchen scullery and three bedrooms, provided with two fireplaces, having a cubic content of 2,000 feet, the rooms being not less than 7 feet 6 inches in height.

Prizes are also offered for the best pair of five-room cottages to cost not more than $1,500; for the best group of three or four cottages, no one cottage to contain more than six rooms, and to be erected for a sum not exceeding $175 a room; for the best detached cottage or pair of cottages, each containing not more than six rooms and not exceeding $175 a room; and in each case the estimated cost is to include neither the architect's fee nor the builder's profit.

Other prizes are offered for the best design and specifications for a detached laborer's house costing not more than $750; a pair of five-room cottages costing not more than $1,500; a group of three or four cottages, no cottage containing more than six rooms, costing not more than $175 a room; and for a detached cottage or pair of cottages, each containing not more than six rooms and costing not more than $175 a room.

An anonymous donor offered a prize of $500 for the cheapest cottage in the exhibition, the jury of award to exercise discretion as to compatibility of cheapness with soundness of construction and suitability for a rural laborer's family; the Associated Portland Cement Manufacturing, Limited, offered a prize of $250 for the best cottage built of cement-concrete; Mr. H. G. Elwes, F. R. S., a prize of $50 for the best design and specifications of a cottage to be constructed entirely of English timber; the Coöperative Small Holdings Society, $50 for the best model of a small holding; and a prize of $250 is offered for the best wooden cottage.

Prizes are also offered for the best invention or improvement in building materials and fittings calculated to improve, cheapen or facilitate the erection of cottages.

Sir Walter Lawrence, Mr. Thackeray Turner, Professor W. R. Lethaby, Mr. R. Weir Schultz, Miss Octavia Hill, Miss Yorke and Professor Sims Woodhead are the judges of the competition.

This competition has caused a most interesting group of model cottages to spring up within the Garden City, a practical demonstration which will be of assistance to all those interested in the better housing of the poor, not only with regard to design, but also in the desirability and expense of various building materials.

Of cottages of the first class, to cost not more than $750, the two more interesting were designed by Percy Houfton and A. H. Clough, that of the latter estimated to cost but $675.

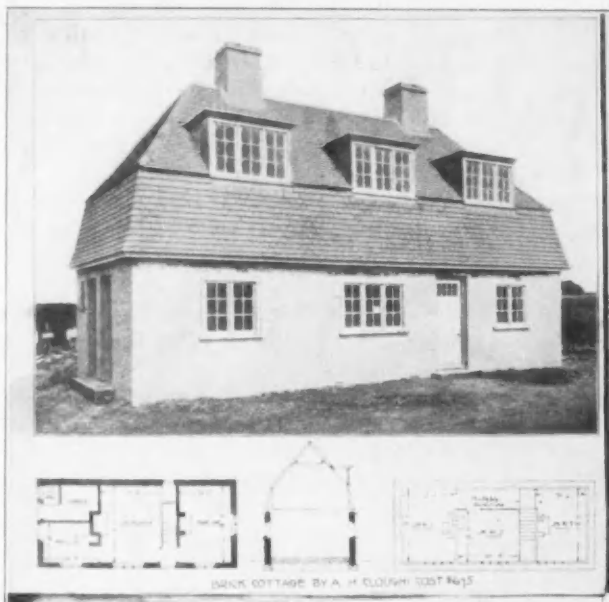
Another building that has attracted much attention is a double cottage, designed by Geoffrey Lucas, and estimated to cost $2,000. The cost of this cottage includes transportation of materials, contingencies, drainage and other charges, a rate of about 10½ cents per cubic foot. The walls are of 9-inch brick and the roof is tiled; the floors are of timber, with a concrete bed beneath. The instructions called for white Arlesey bricks and sash windows, both difficult to employ in a small building, the height of which is kept low to reduce expense; but it is generally admitted that the architect has overcome this difficulty.

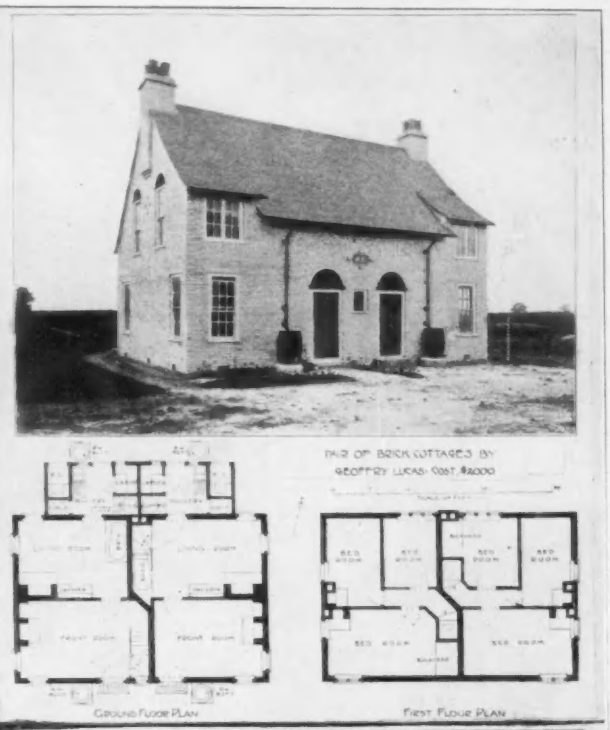
A still more expensive pair of cottages was designed by Baillie Scott. This building is estimated to cost $2,100, or $175 a room. The walls are of 9-inch brick, rough-cast, with oak half-timber; the ground floor paved with red bricks, the upper floors boarded; the roof of oak, red tiled; and the foundations are of concrete. The two cottages are so designed that they may be converted into one.

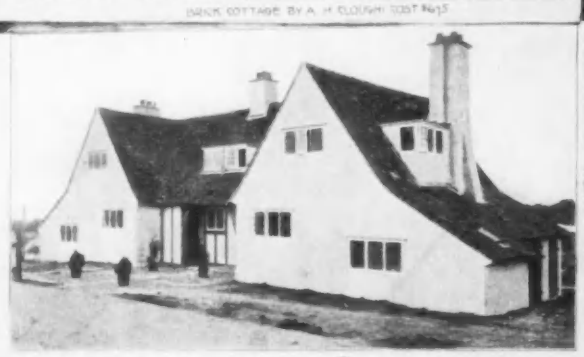
The Bourneville Village Trust has erected a pair of cottages estimated at $1,940, employing materials and designs that experience in building about six hundred houses at Bourneville, near Birmingham, has proved most successful. The walls are of red brick, 9 inches outside and 4½ inches inside; the floors are 1-inch tongued and grooved boards and 9-inch quarries; the roofs of Broseley tiles; the footings of brickwork 18 inches wide, on solid bottom soil, while Tobin ventilators are placed in every room. The cost of the pair is placed at about 10 cents a cubic foot, or about $155 a room, while the expense of installing hot-water boilers, tanks, piping and bath with taps, etc., is $50 per house.

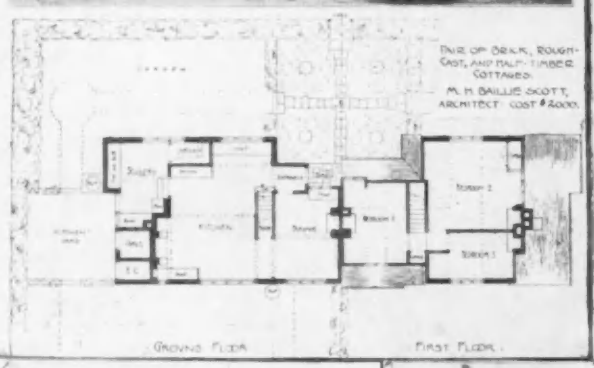
To the right of the Bourneville cottage the Fireproof Partition and Spandrel Wall Company has erected a two-floor cottage, costing $1,280, about 10½ cents the cubic foot, including drainage and fencing. Brick-on-edge, reinforced with iron and built in cement-mortar, is used for the walls. This construction is thought to be as strong as ordinary 9-inch walls and self-supporting, foundations being required under stanchions only. Protection against damp is obtained by the rough-cast outside, hollow space inside and roofing felt, etc.

The precise value of this Letchwork exhibition of model cottages is difficult to estimate. Not only will it supply architects with much data for the construction of the cheap house, but it stands as a practical example of what can be done for little money, a service to manufacturers interested in the housing of their employees, as well as to would-be householders of slender means. But the desire of its promoters to obtain a type of cottage to

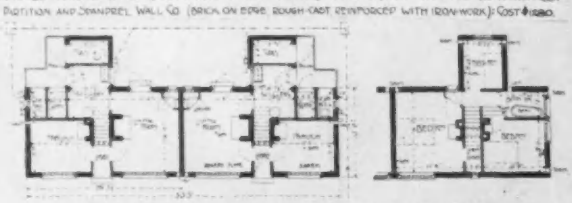


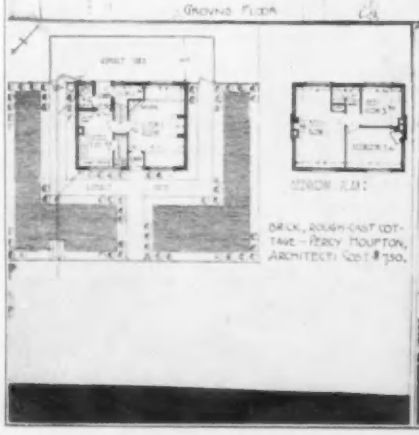


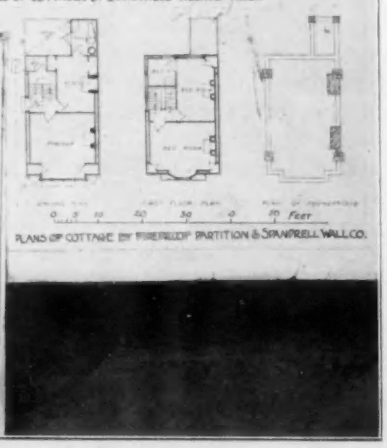




PAIR OF BRICK COTTAGES BY BOURNVILLE VILLAGE TRUST (COST £1040) AND COTTAGE BY FIREPROOF PARTITION AND SPANDREL WALL CO. (BRICK ON EDGE, ROUGH-CAST REINFORCED WITH IRON-WORK): COST £1280.



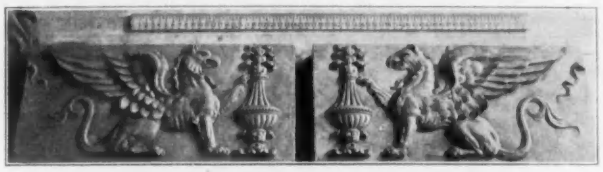




A GROUP OF CHEAP COTTAGES EXHIBITED IN COMPETITION AT LETCHWORTH, ENGLAND.

cost $750 inclusive, suitable for the agricultural laborer, has not been fulfilled. Little dependence can be placed on these extremely low estimates of cost. By the conditions of the competition architects' fees and builders' profits, aggregating, perhaps, 15 per cent of the client's outlay, are eliminated. But many competitors seem also to have omitted from their estimates the cost of transporting materials as well as the expense of the many small fixtures that make a house livable. And so when the householder comes to duplicate, in the ordinary course of trade, one of these Letchworth cottages, he must add from 15 to 25 per cent of the estimated cost.

Not only are these estimates of cost most unsatisfactory, but in many instances the designs show a failure to study the function of rooms and the utility of space, valuable room being taken up with passages, large landings



DETAIL BY FISHER & LAWRIE, ARCHITECTS.
Northwestern Terra Cotta Co., Makers.

and nooks, while the relative positions of beds, windows, etc., have not been kept in mind.

Nevertheless, so unique an exhibit will be of great value to those interested by necessity or choice in the "simple life."

THE last BRICKBUILDER competition calling for designs for a fireproof house constructed entirely of terra cotta fireproof material has aroused a good deal of interest among our subscribers, as a result of which we have received many inquiries from various parts of the country. The competition has started thought along new constructive lines, and some interesting results are pretty sure to follow. The ordinary form of terra cotta building block can be adapted for several varieties of construction. These blocks are made four, eight and twelve inches thick, and so afford an opportunity for varying thicknesses of wall and varying bonds, incidentally allowing of considerable variety in the exterior treatment. The texture

DETAIL BY FULLER & PITCHER, ARCHITECTS.
Excelsior Terra Cotta Co., Makers.

of these blocks is almost invariably pleasing, and by a little selection several varying shades can be obtained in the market, so that the possibilities of color treatment are quite large; and when the material is treated with a soft glaze, which increases its cost but slightly, the scope of color treatment is considerably enlarged. Also, a wall constructed of such blocks affords the very best foundation for a treatment of rough-cast plaster or even a facing of brick, and the hollow spaces in the blocks insure both warmth and dryness in winter and a certain amount of protection against heat in summer. The material itself is practically indestructible and impervious to even the most excessive conflagrations, and its use

DETAIL BY WIDMANN, WALSH & BOISSELIER, ARCHITECTS.
Winkle Terra Cotta Co., Makers.

offers large opportunities for artistic treatment. We shall be glad at all times to show in THE BRICKBUILDER the results which architects are able to obtain by the employment of this material. We hope the time is at hand when wood as a building material for external use will largely cease to be employed. Its place must be taken by some material which is durable, comparatively inexpensive and of practical as well as artistic value. It is our intention to make a thorough investigation of the different methods in which terra cotta blocks can be used, obtaining comparative costs of other materials, and embodying the

DETAIL BY NEW JERSEY TERRA COTTA CO.

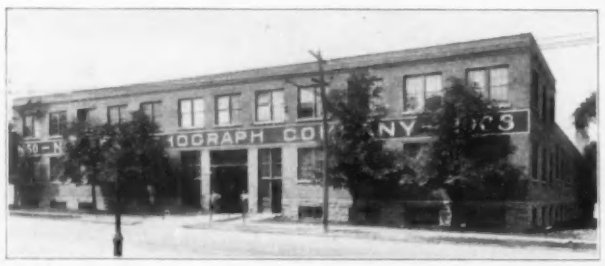
results in a series of articles which will appear during 1906. Constructive terra cotta is undoubtedly destined to be the material which will give the best results in all respects when wood has become so scarce as to be prohibitory.

CONCRETE BLOCKS.

WE have seen in the market within a short time several samples of a composition which is sold as imitation sandstone. It is made of sand and cement in proportions varying from one to three to one to five, mixed with a very slight amount of water and tamped very strongly into wooden or plaster moulds, the blocks being removed from the moulds almost as soon as the mixture is tamped in place and allowed to set with an occasional sprinkling of water. These blocks present a very creditable surface and one which closely resembles some grades of sandstone. Unfortunately they resemble sandstone in more respects than mere appearance. We have yet to see offered in the market a natural sandstone which could be called in any sense a first-class building material. With the exception of one or two quarries which have been opened up in Colorado, all of the sandstones on the market are loosely compacted masses of

BIGELOW SCHOOL, SOUTH BOSTON, MASS.
A. J. Bateman, Architect.
Built of Gray Kittanning Brick.
Fiske & Co., New England Agents.

sand with a very slight siliceous binder, and consequently with a very high absorptive rate. Such stone will cut beautifully, will present a uniform texture and lends itself to all kinds of tooled surfaces, but it simply will not stand when subjected to sharp alternations of freezing and thawing. If this is true of sandstone, the fatal defect is even more pronounced in the so-called cement blocks to which we have alluded. If the cement and sand are mixed with what is a proper amount of water at the start a block can be obtained which is fairly dense and is less likely to be attacked by frost, but it is impossible to economically secure in such a composition a sandstone effect. Sidewalk builders learned long ago that the only form of cement or concrete which would stand the weather was one in which there was but a slight admixture of sand, the surface itself being almost pure cement; and whoever uses the so-called imitation sandstone with the idea that it will stand our weather is sure to pay pretty high for his experience in the long run.



A MANUFACTURING BUILDING FOR HEAVY MACHINERY.
LAID UP IN STAR BRAND AKRON CEMENT.

When it comes to a question of standing fire, these manufactured blocks are only a trifle better than the building blocks made of plaster of Paris. They will withstand a moderate heat, so will wood blocks for that matter; but no compound with cement as a binder can be depended upon to resist any great amount of heat. If the aggregate is composed of well burned cinders it will resist a lengthy exposure to a low temperature without cracking, though the surface will be very speedily disintegrated and fall apart. If, on the other hand, the mixture is what is known as stone concrete, a slight amount of excessive heat will crack it all to pieces; and after being exposed to heat, even though the material shows no immediate signs of disintegration, some unknown process goes on within the block as a result of which ultimately it will be cracked and checked through from end to end. This has been demonstrated beyond question by repeated fires as well as by careful laboratory tests. The fact that in some buildings which have been destroyed by fire the concrete flooring has not absolutely disappeared simply shows that in that particular case not a great deal of heat was manifested. Concrete has its excellent uses; for some purposes it is unsurpassed, but surely for fireproofing it is more than a doubtful experiment.

BUYING BOOKS.

ARCHITECTURAL books are always expensive because the market is necessarily quite restricted. The cost of production is large, and the number of those who would care to produce such work and who have the requisite equipment is quite small. Consequently the cost of even a modest architectural library is quite excessive. No matter how strenuously one may desire progress before precedent or originality before the academy, the fact remains that architecture is essentially one of the retrospective arts, that to be alive and in the procession one must keep up with what other architects are doing in the great cities, and all this means a constantly growing library and increased expense. It also means, however, growth and strength, and the ability of an architect, certainly as far as relates to his intentions, is, after all, measured quite accurately by the extent of his architectural library.

BUILDING OPERATIONS FOR AUGUST.

THE building operations in the various cities of the country, as shown by reports to the *American Contractor*, New York, covering the building permits issued during August as compared with the corresponding month of last year, fairly surpass the expectations raised by the remarkable record of July. In the aggregate the building operations of this country are now more extensive than at any previous time in its history. Almost universally there has been a gain over last year, and in many instances this is simply astonishing.

IOWA APARTMENTS, GRAND RAPIDS, MICH.
A. W. Rush & Son, Architects.
Brick furnished by Columbus Brick and Terra Cotta Co.
F. H. McDonald, Agent.

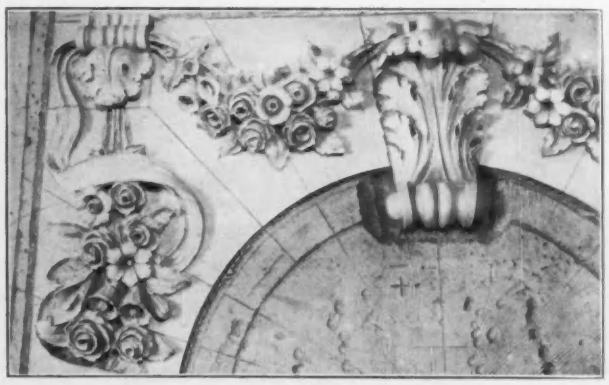
COLUMN AND CAP FOR PERGOLA.
H. E. Reeve, Architect.
Brick, Terra Cotta and Tile Co., Makers.

The permits issued in Greater New York amounted to $25,296,674, being almost exactly double those of August, 1904. In Manhattan the gain was 134 per cent; in Brooklyn, 26 per cent; and in the Bronx, 258 per cent. Operations in Chicago are second only to those of the metropolis, amounting to $6,401,150, a gain of 80 per cent. Philadelphia follows Chicago with permits amounting to $2,876,200. St. Louis reports $1,855,980, a gain of 25 per cent. This is especially gratifying, showing as it does that the large building operations there during the past two years were not carried on at the expense of the future, as was freely predicted. That the building prosperity is as wide as the country is shown from the following list of permits, with the percentage of gain: Buffalo, $885,055, 44; Dallas, $274,825, 77; Denver, $490,350, 25; Detroit, $945,000, 30; Duluth, $192,449, 79; Harrisburg, Pa., $406,525, 250; Hartford, $343,810, 223; Indianapolis, $742,849, 131; Louisville, $863,373,197; New Orleans, $1,013,906, 250; Newark, N. J., $759,749, 57; Scranton, Pa., $286,401, 14; Salt Lake City, $281,934, 72; Winnipeg, Man., $1,224,500, 28. In view of the fact that the yellow fever has been raging in New Orleans, the showing made by that city is very remarkable. The losses are comparatively small and, in almost all instances, seem chargeable to local conditions. Baltimore is the only large city which shows a loss, amounting to only 14 per cent, and due to the rebuilding operations of last season.

THE STEEL MARKET.

THE steel production in this country is considered a pretty good index of national prosperity. Never before in the history of the Monongahela valley have there been so many mills, furnaces and shops under process of construction. Twenty-five million dollars is being expended in plants in that district. Nor is this entirely the work of the United States Steel Corporation. That world-famous combine has not seemed to materially alter the number of independent plants in operation, but rather to have increased the number of mills and to have greatly enlarged the capacity for steel production.

DETAIL BY NEW YORK ARCHITECTURAL TERRA COTTA CO.



DETAIL BY S. S. GODLEY, ARCHITECT.
Indianapolis Terra Cotta Co., Makers.

IN GENERAL.

Otto H. Lang, formerly architect and structural engineer of the Texas and Pacific Railway, and Frank O. Witchell, formerly of Sanguinet & Staats, architects, have formed a copartnership for the practice of architecture under the firm name of Lang & Witchell. Offices, Wilson Building, Dallas, Texas. Manufacturers' catalogues and samples desired.

The Hydraulic Press Brick Company of St. Louis will supply the gray brick to be used in the new Baptist Sanitarium at Dallas, Texas, and the mottled old gold brick for the new courthouse at Tuskegee, Ala. Both of these buildings will require large quantities of brick.

F. H. Chapin, formerly representative of the Hydraulic-Press Brick Company at Minneapolis, Minn., has been elected assistant secretary and sales manager of the company.

Bennett's roofing tiles will be used on the New National Park Seminary at Forrest Glen, Md.; water tower at Roland Park, Md.; telephone station, Navy Yard, Washington, and a new house at Spring Lake, N. J.

The Celadon Roofing Tile Company has purchased the plant of the Imperial Clay Company of Cleveland, Ohio, whose factory is located at New Lexington, Ohio. The necessity of this move was owing to their inability to take care of a rapidly growing business with the present capacity of the Alfred plant, and the imperative demand for an immediate increased output. By acquiring the New Lexington plant they have trebled their capacity and secured a product the character of which is exactly similar to their own In addition to the roofing tile, the New Lexington plant will continue the manufacture of its high-grade face brick. The names of the officers of the company guarantee that the business will be conducted along straightforward and progressive lines. They are: Wm. R. Clarke, President; Wm. R. Worley, Vice-President and General Manager; A. W. Brown, Treas-

DETAIL BY GEORGE R. MANN, ARCHITECT.
St. Louis Terra Cotta Co., Makers.

urer; A. B. Clarke, Secretary. The sales office for roofing tile will be at 156 Fifth Avenue, New York City. The sales office for brick, as well as the operating and financial conduct of the business, at 716 Cuyahoga Building, Cleveland, Ohio. Branch sales offices at 723 Bessemer Building, Pittsburg, Pa., and 1001 Marquette Building, Chicago, Ill.

DETAIL BY A. A. RITCHER, ARCHITECT.
Conkling-Armstrong Terra Cotta Co., Makers.

AN INTERESTING NEW HOTEL AT ATLANTIC CITY, PRICE & McLANAHAN, ARCHITECTS.

ATLANTIC CITY has never been famous as a place where fire would have trouble in gaining quick and disastrous headway. As a result of the lessons taught by the big blaze of three years ago, however, a building is now going up there which will be not only absolutely fireproof, but which embodies many novel structural features. This is to immediately adjoin the present Marlborough Hotel on the Board-walk.

HOUSE AT ST. LOUIS, MO.
Roofed with American S Tile.
Cincinnati Roofing Tile and Terra Cotta Co., Makers.

The new building, which is being put up by the National Fireproofing Company, will make a new record for quick construction. On June 17 the big block of ground on which this building is being reared was absolutely vacant. On November 1 the completed structure, containing two hundred and fifty rooms, and rising to a height of six floors throughout and to nine floors in a central dome, will be turned over to its owners ready for decoration and furnishing. Completely equipped, the hotel will open its doors on February 1.

Stretching 425 feet back of the Board-walk, this new building varies from 50 to 125 feet in width at different points. One of its features will be a great sun parlor extending around the front part of the building on the second floor. This sun parlor will have an outlook up and down the Board-walk. It will be 25 feet wide and will contain six fireplaces of unique design, thus making the parlor particularly attractive in winter. There will also be a sun parlor stretching entirely along one side of the building. In fact, the entire second floor will be enclosed only with glass on one side.

The structural part of the building is composed largely of hollow tile reinforced by a special steel bar. There are no large steel girders or beams in the structure. The outer walls are to be of hollow tile with pebble-dashed exterior finish. The use of hollow-tile building blocks and fireproofing in this wholesale manner marks a distinct departure in building methods.

Another noteworthy feature of this hotel will be the fact that every room will have a bath and a bay window. The hotel structure rests on thirteen hundred piles which were driven into the sand to a depth of 20 feet, considerably below the water line, by jettying; that is to say, holes were bored for the piles by powerful streams of water. No excavating had to be done at all. Engineers say, however, that the bath of salt water which the wood piles obtained in this jettying process will make them virtually everlasting when strongly surrounded by the abutting sand below the level of low water.

NEW BOOK.

CEMENTS, LIMES AND PLASTERS, THEIR MATERIALS, MANUFACTURE AND PROPERTIES. By Edwin C. Eckel, C. E., Assistant Geologist, U. S. Geological Survey. 8vo, xxxiv + 710 pages, 165 figures, 254 tables. Cloth, $6.00 net. New York: John Wiley & Sons.

For the convenience of those who wish to make further studies of such subjects, very complete reference lists have been placed in almost every chapter of this volume. These lists necessarily contain the names of some papers and articles published in European periodicals or transactions, but most of the titles cited will be found to be from readily accessible American journals. Stress has been laid, in the discussion of manufacturing methods, on the general chemical and physical principles which underlie these methods rather on the details, which differ at every plant and may change with every year.

WANTED — To handle account of some good corporation doing business with architects, engineers and contractors, on either a salary or commission basis. Extensive acquaintance west of Missouri River, including California and the Northwest. Present location Denver, Col. Best of references. Correspondence solicited. Address "Salesman," care of "The Brickbuilder."

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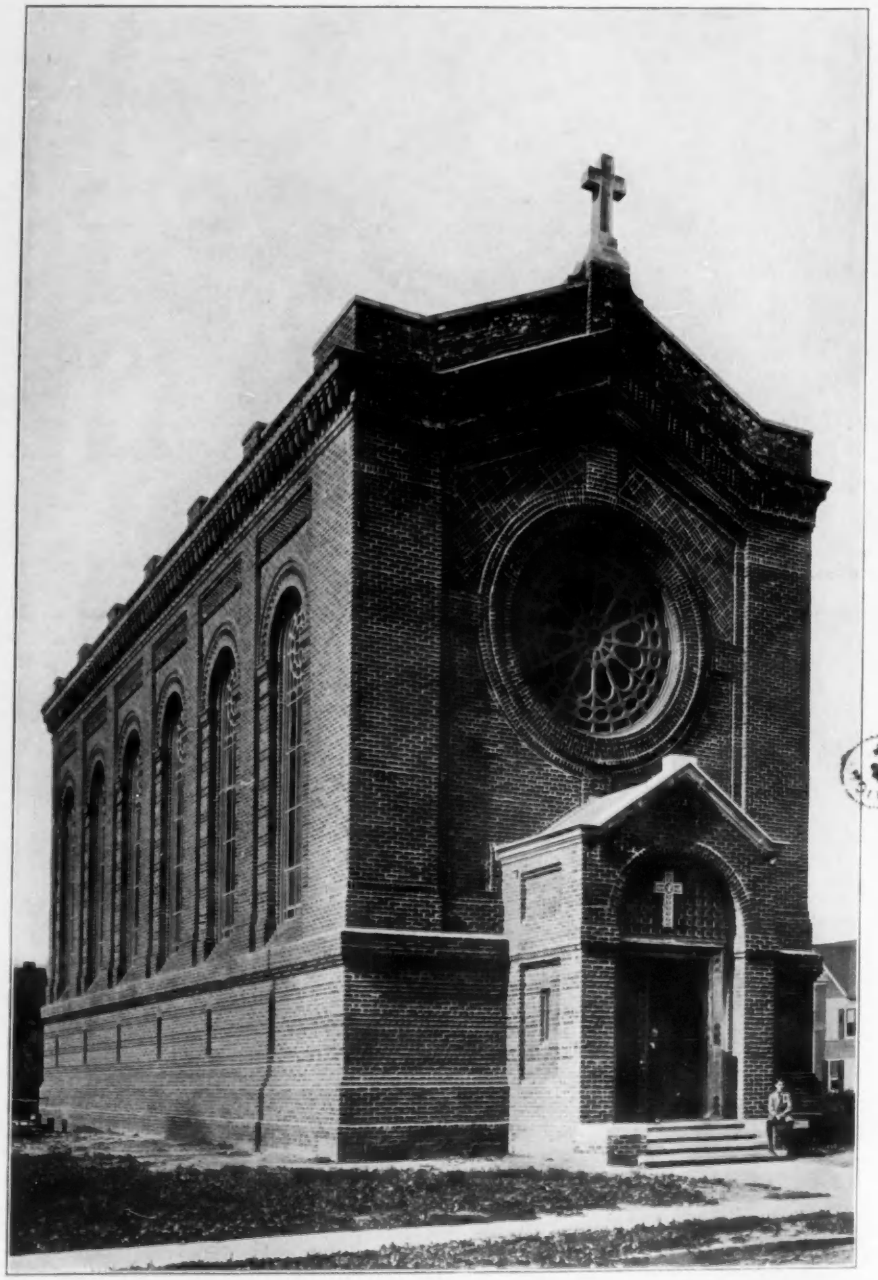
MAGINNIS, WALSH & SULLIVAN, ARCHITECTS.

UNIV. OF MICH.

THE LAMBS' CLUB, NEW YORK CITY.

McKim, Mead & White, Architects.

UNIV. OF ILL.



ST. JUDE'S CHURCH, BROOKLYN, N. Y.
LORD & HEWLETT, ARCHITECTS.

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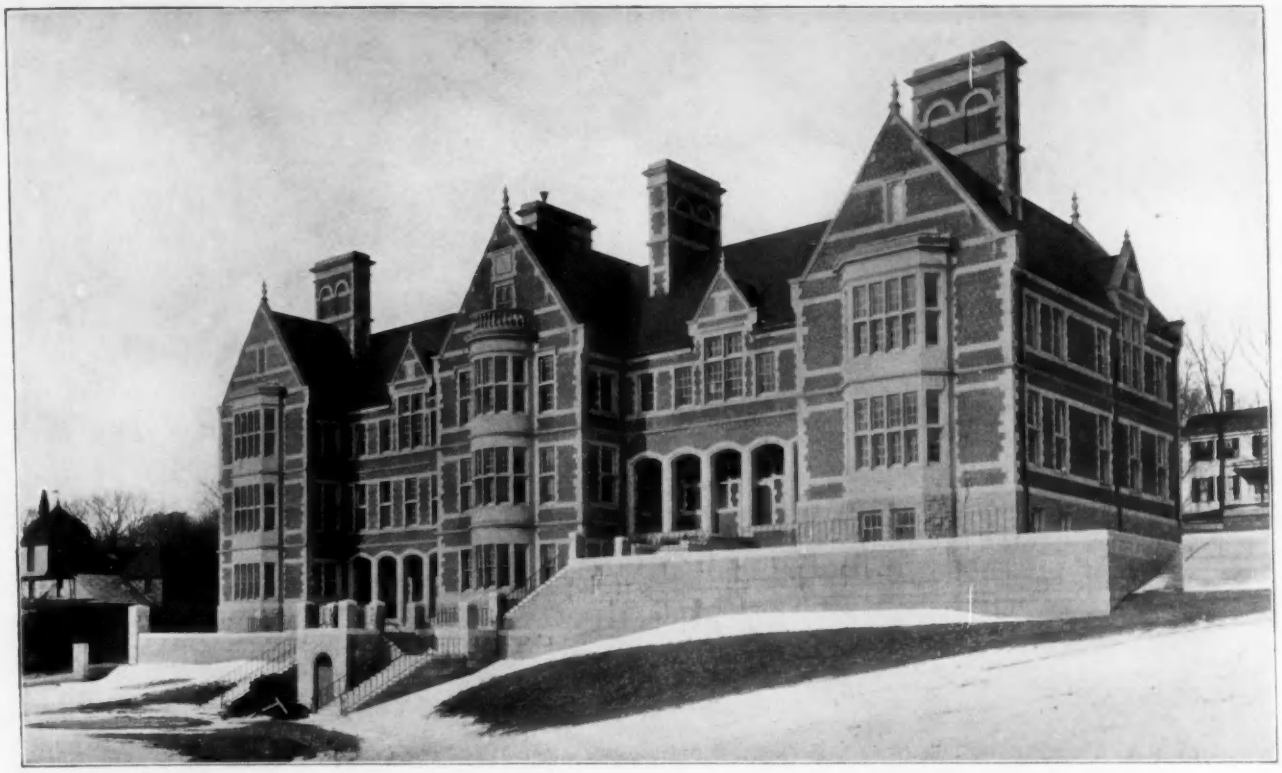
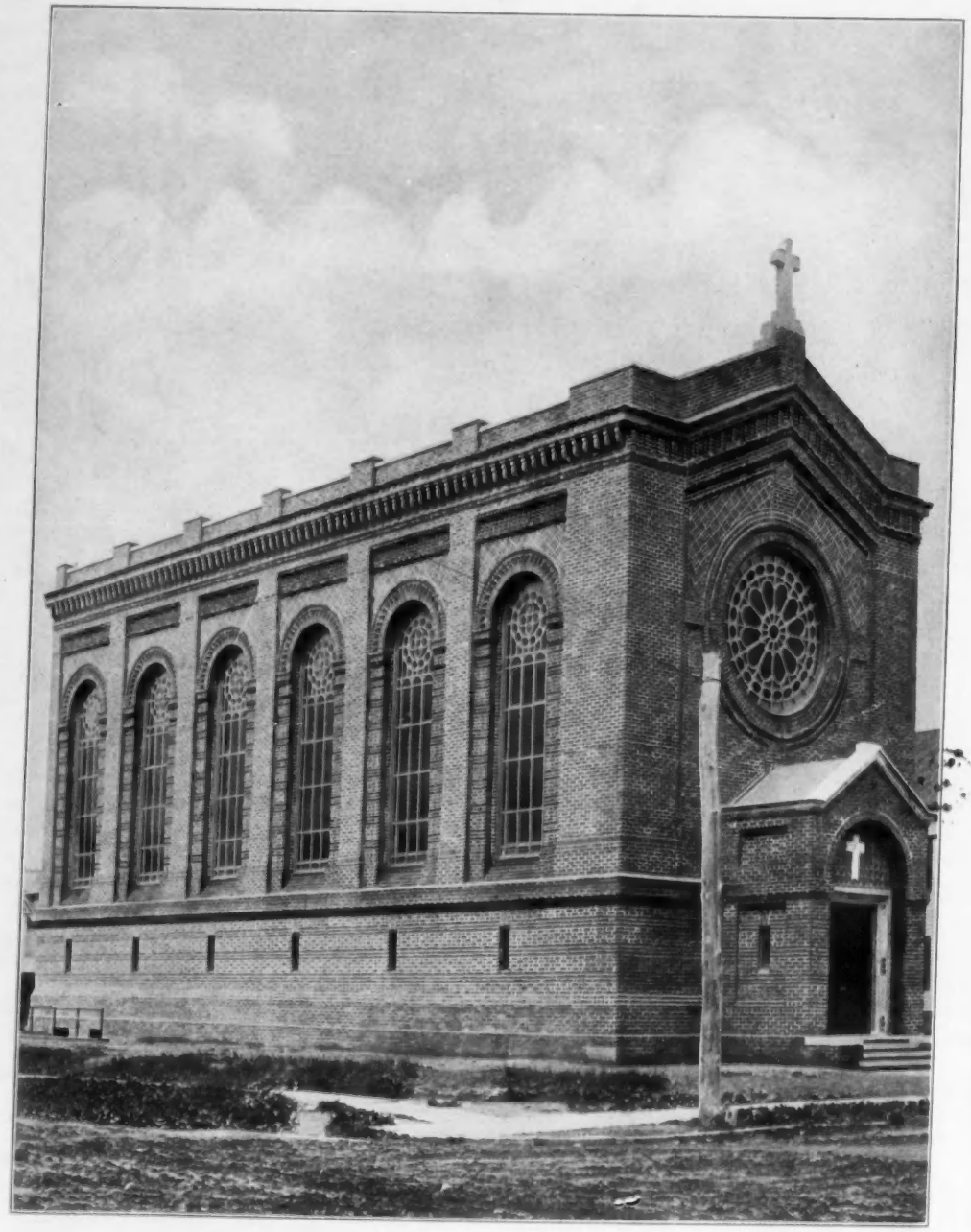


SEARLES MEMORIAL SCHOOL, METHUEN, MASS.

HENRY VAUGHAN, ARCHITECT.

Univ. of Mich.



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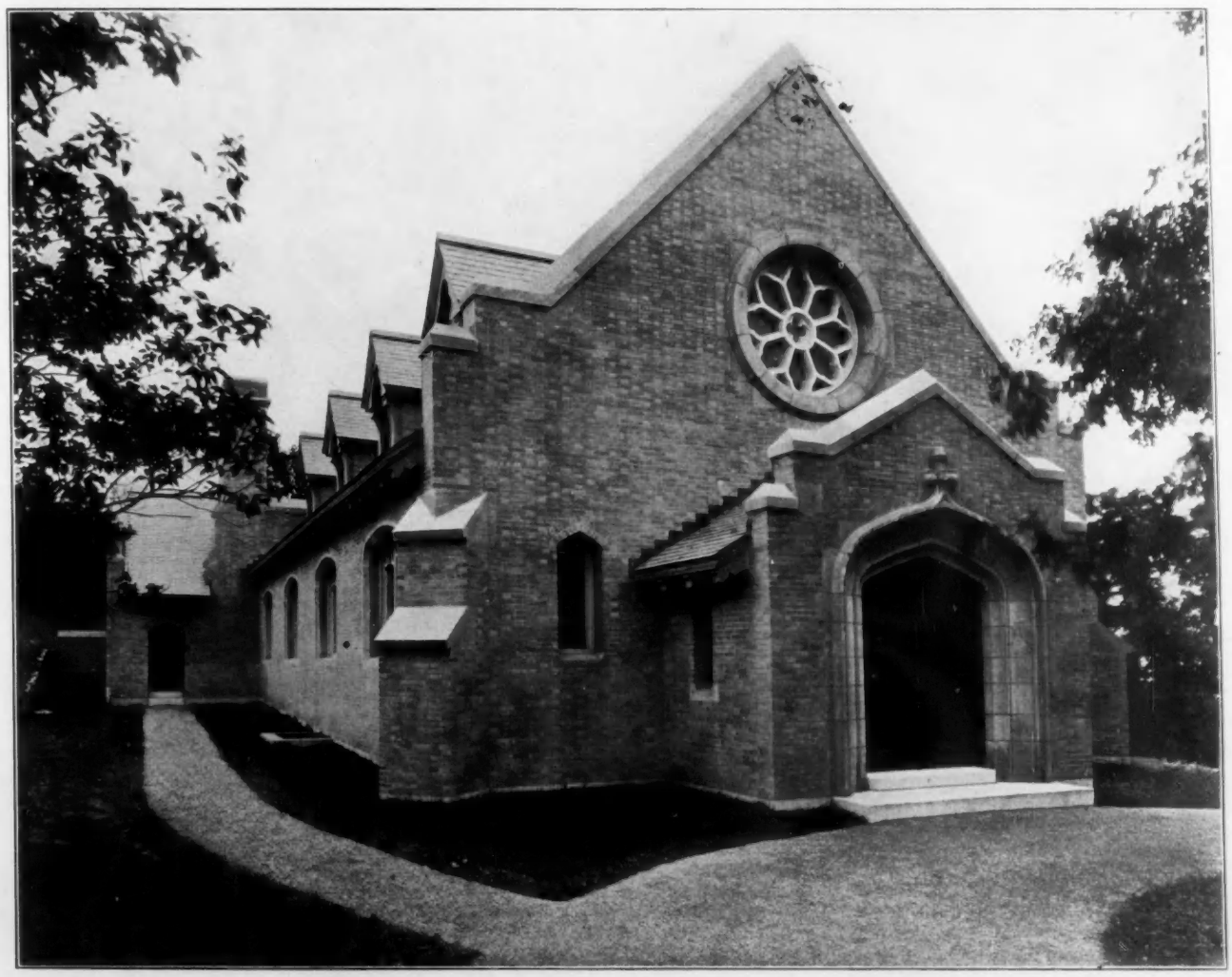
LORD & HEWLETT, ARCHITECTS.

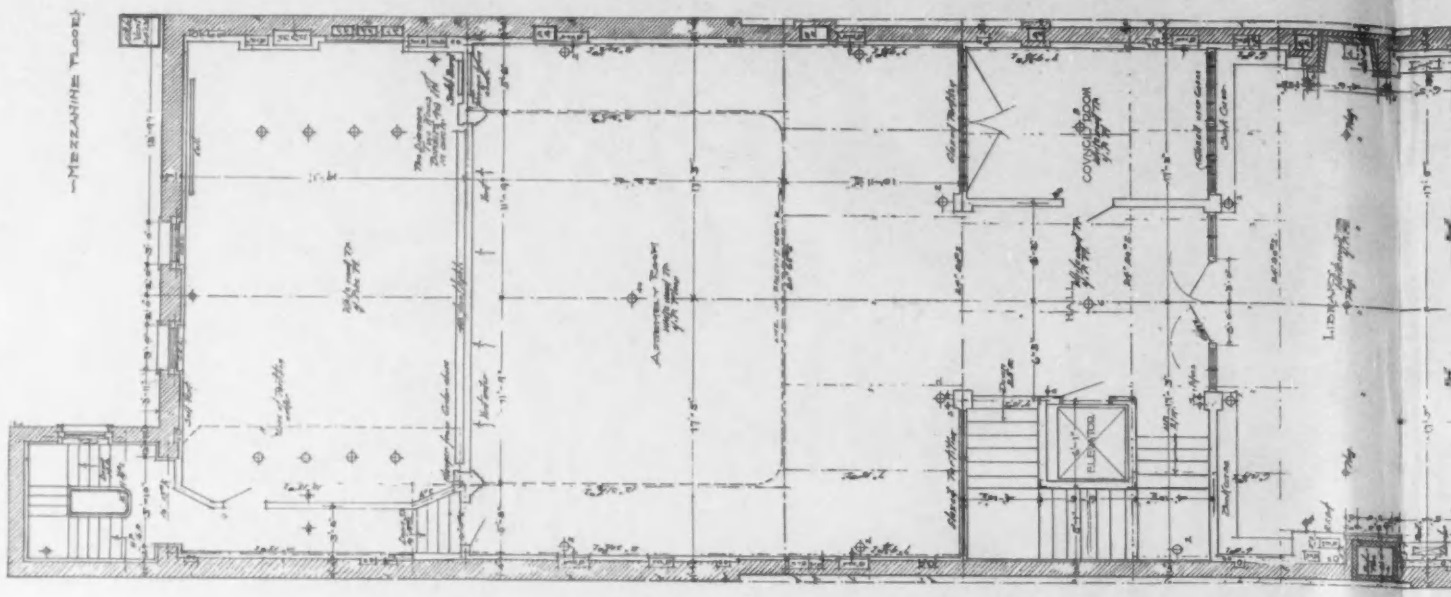
UNIV. OF MICH.

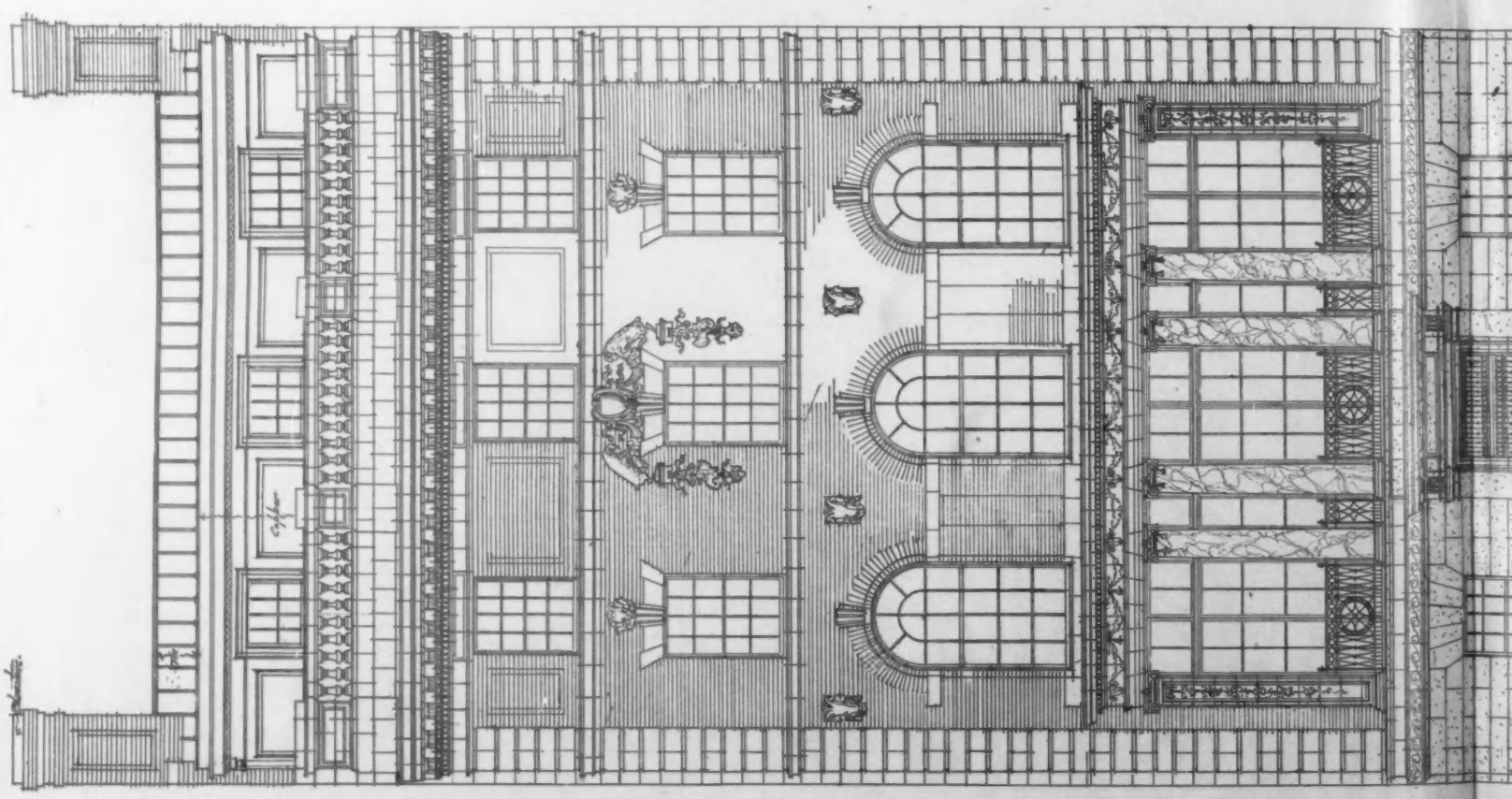


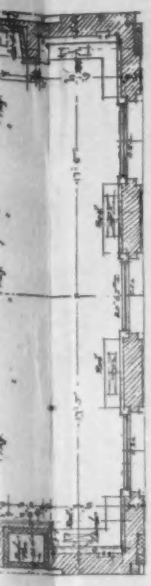
CHAPEL FOR McLEAN HOSPITAL, WAVERLEY, MASS.

WHEELWRIGHT & HAVEN, ARCHITECTS.

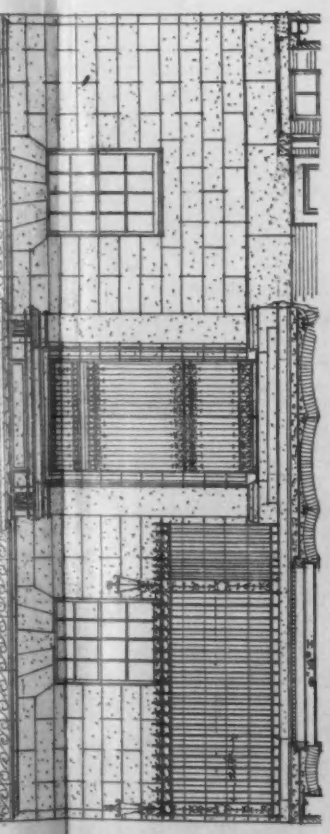
VOL. 14. NO. 9.


MEZZANINE FLOOR
CONSULTING ROOM
ASSEMBLY ROOM
LIBRARY
FILING

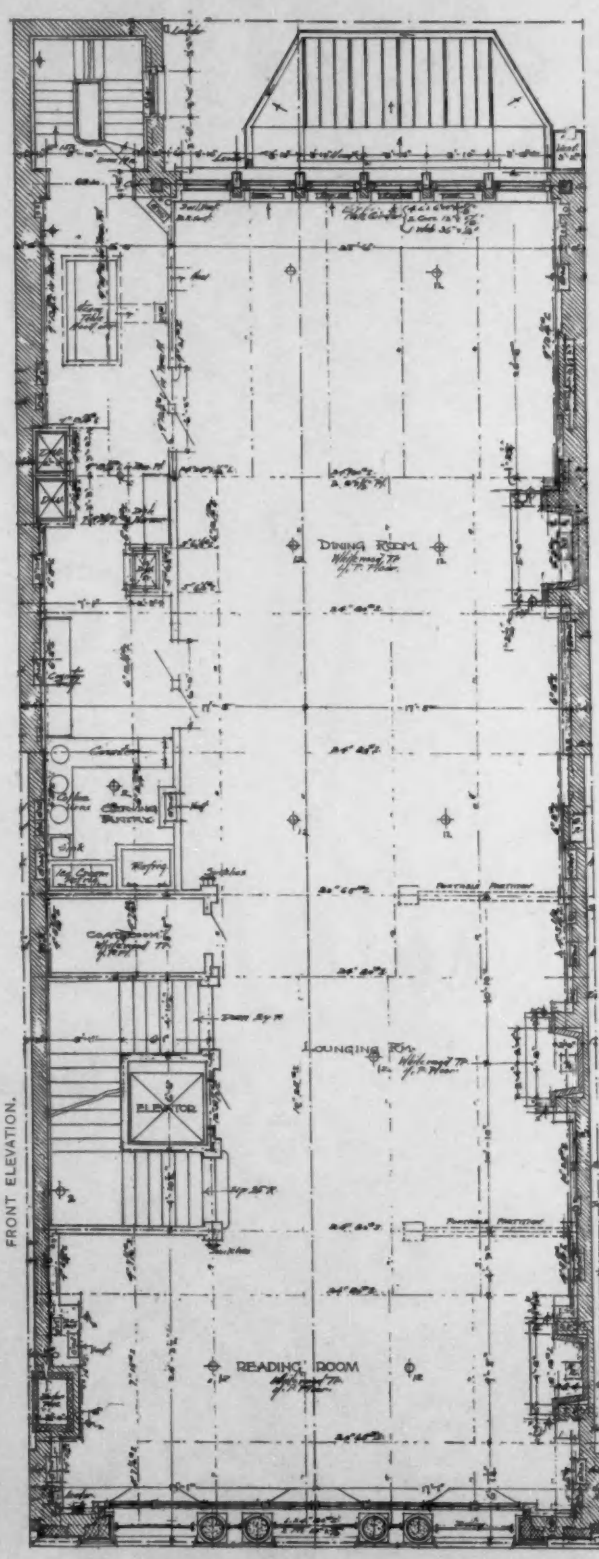




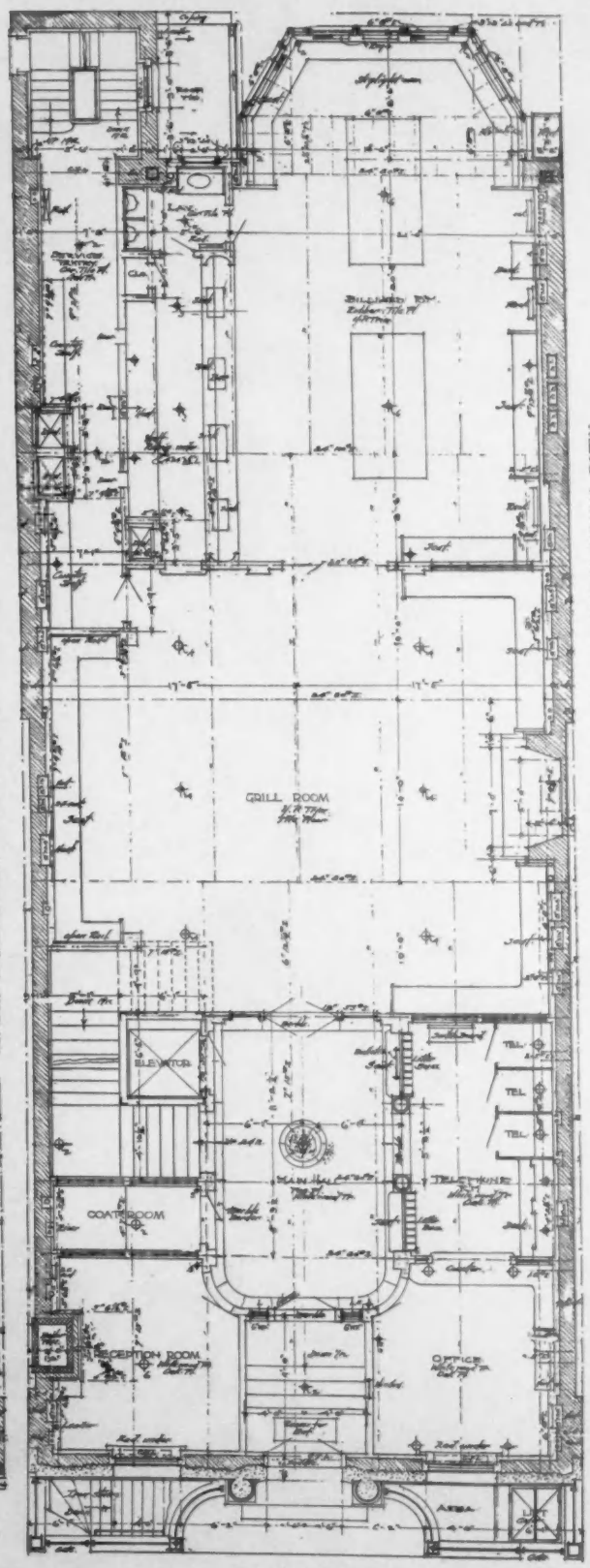
THIRD FLOOR PLAN.



FRONT ELEVATION.



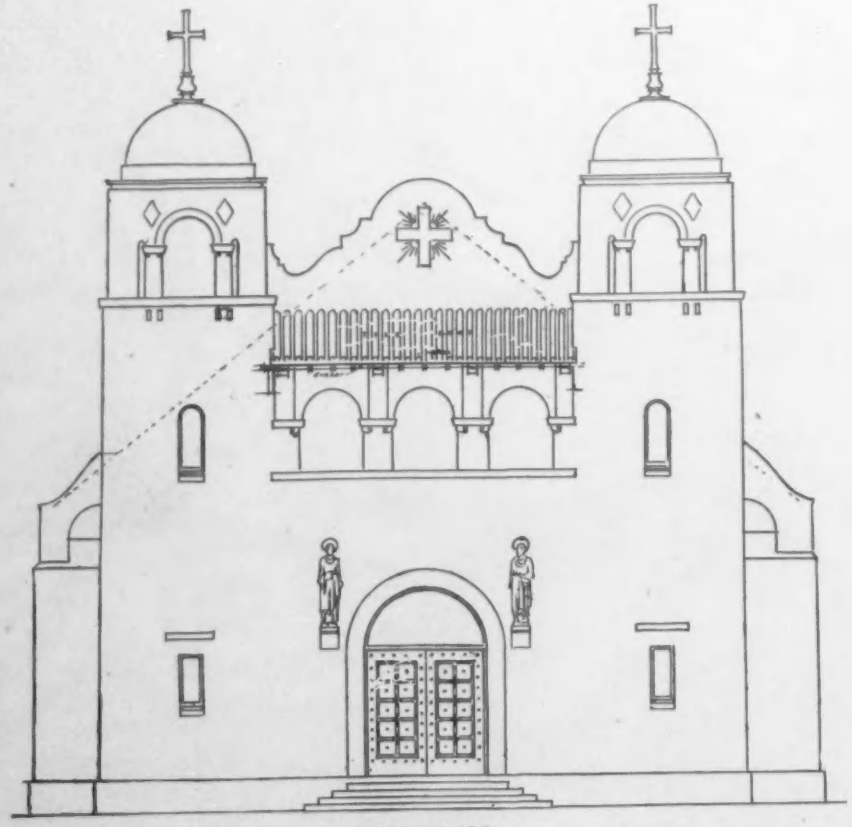
SECOND FLOOR PLAN.



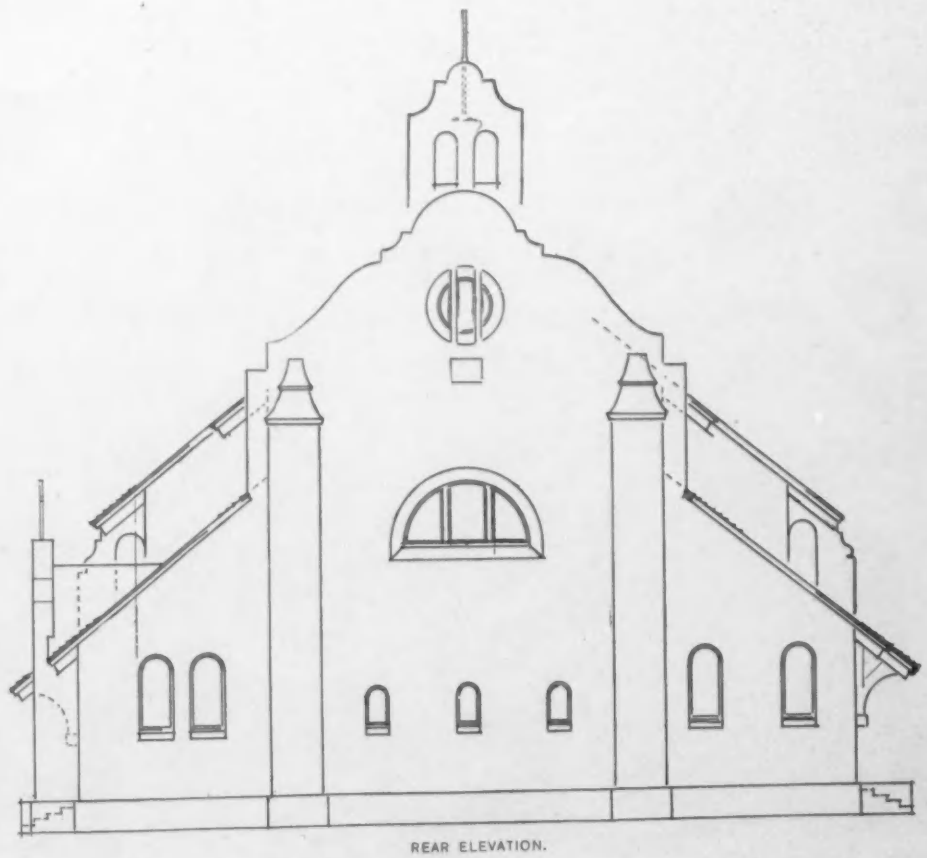
FIRST FLOOR PLAN.

THE LAMBS' CLUB, 126 WEST 44TH STREET, NEW YORK CITY.

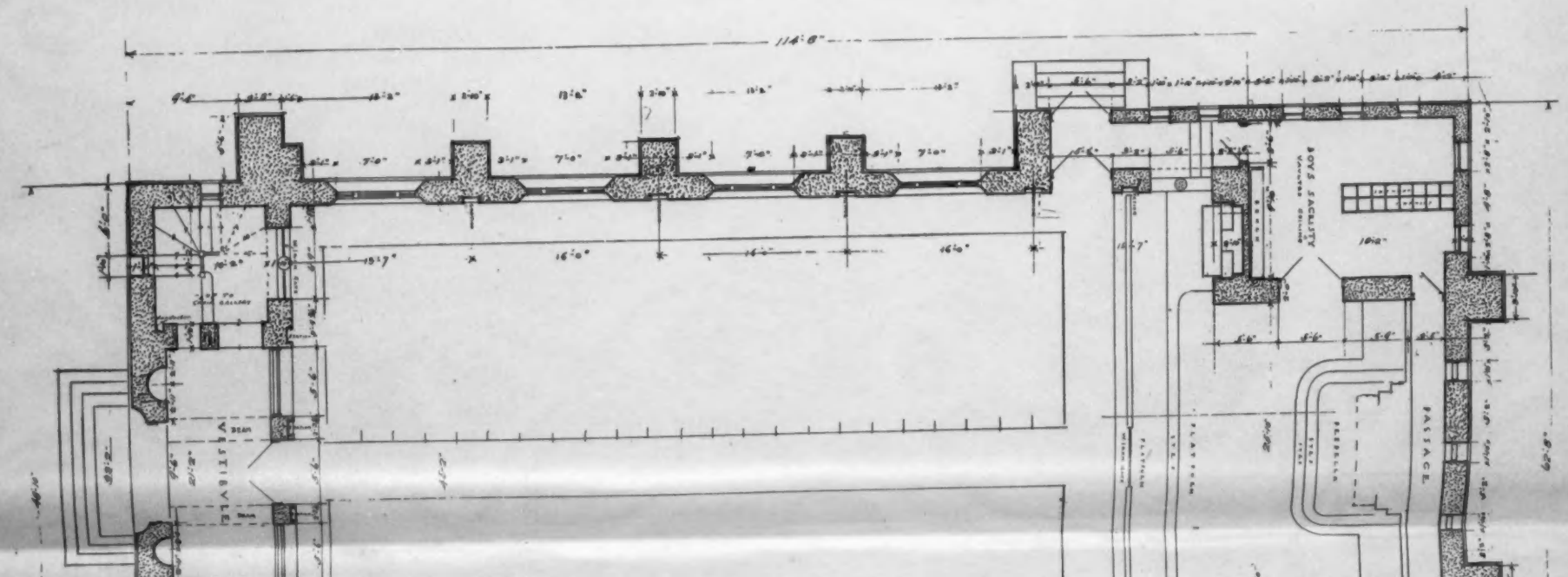
McKIM, MEAD & WHITE, ARCHITECTS.

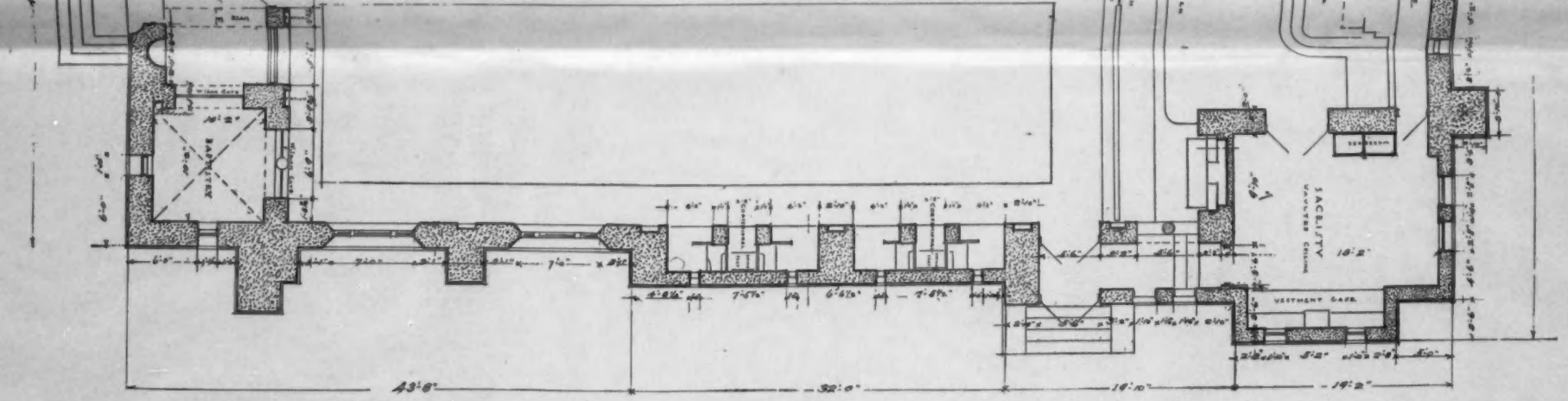


FRONT ELEVATION.

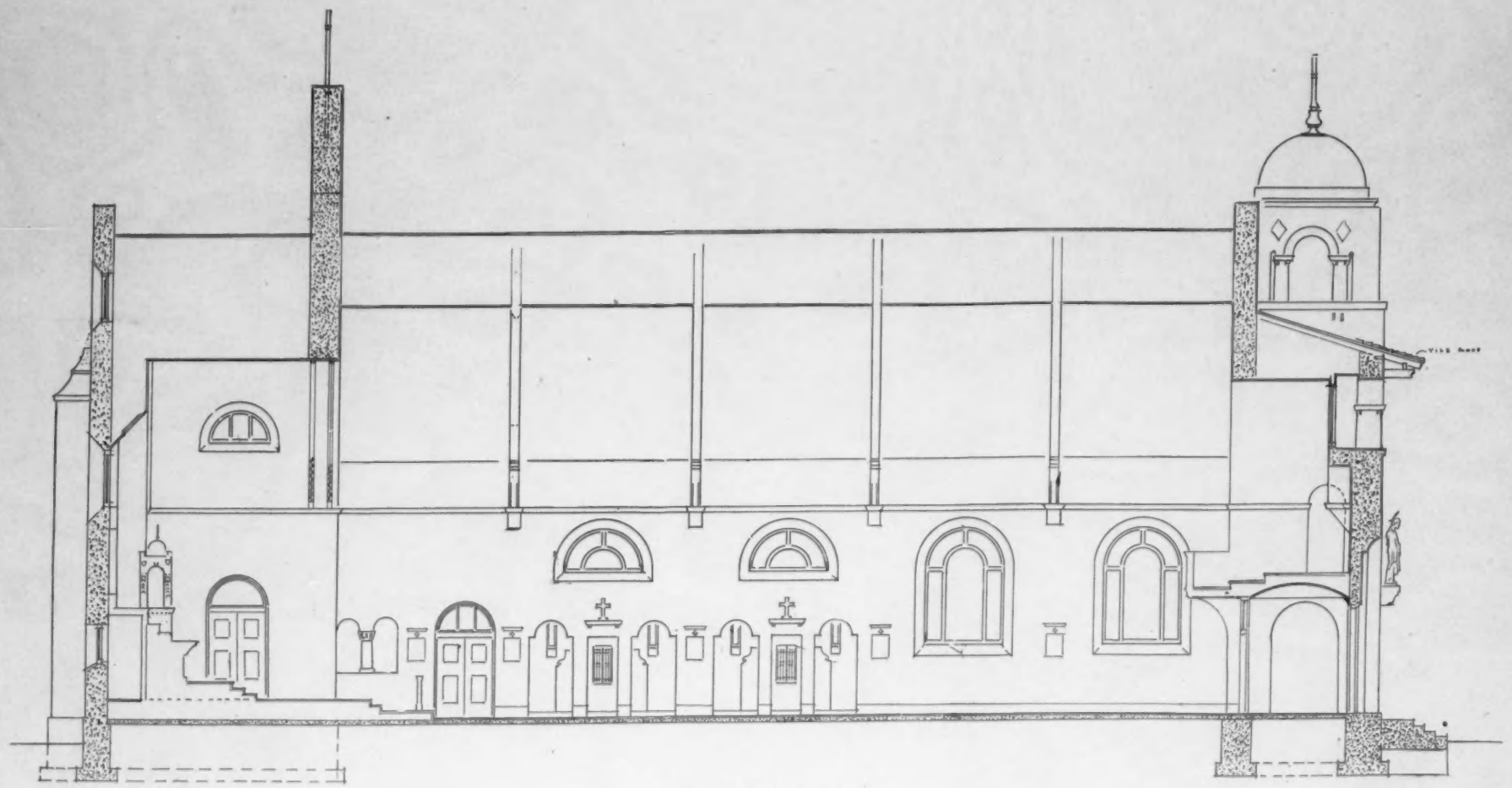


REAR ELEVATION.





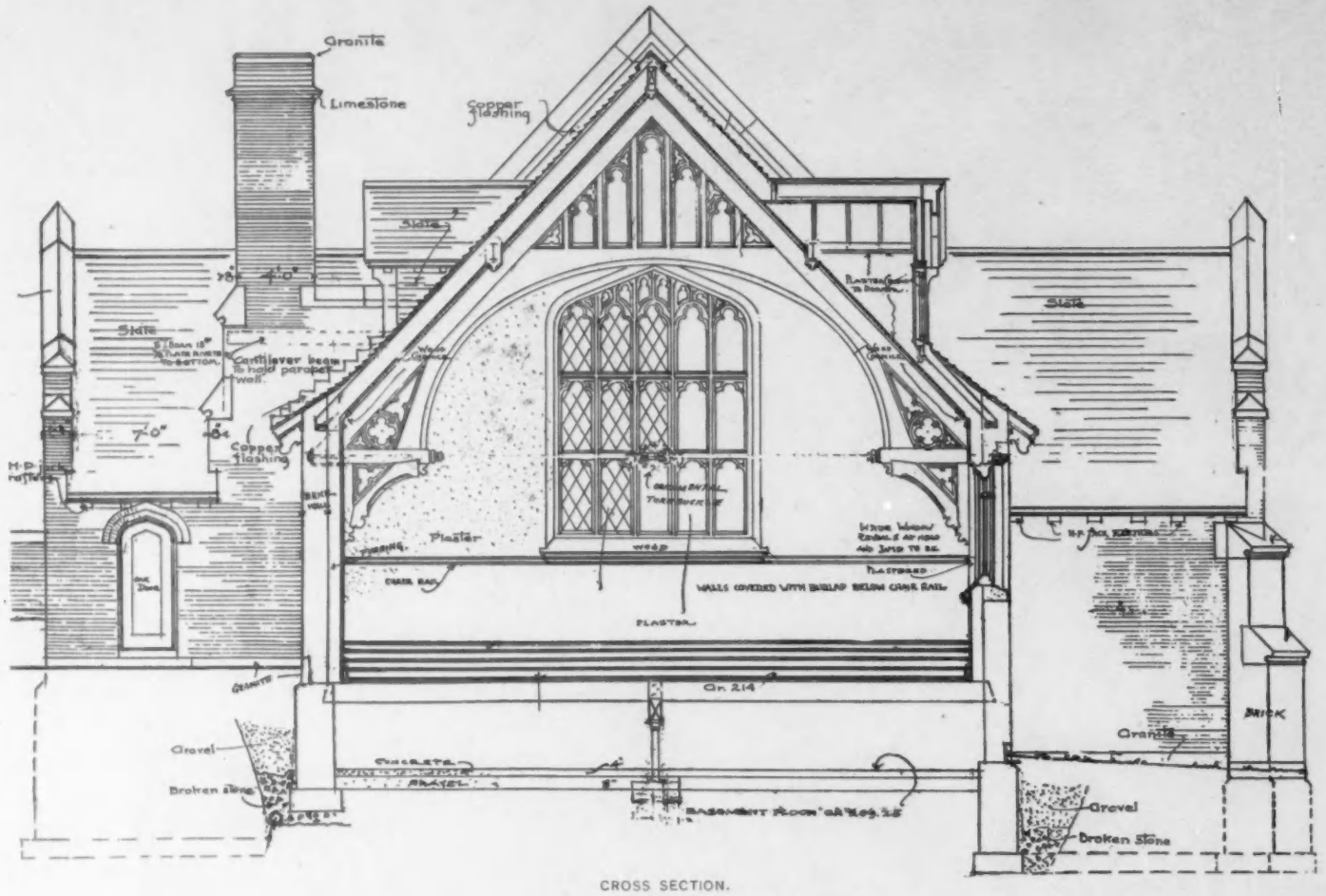
FLOOR PLAN.



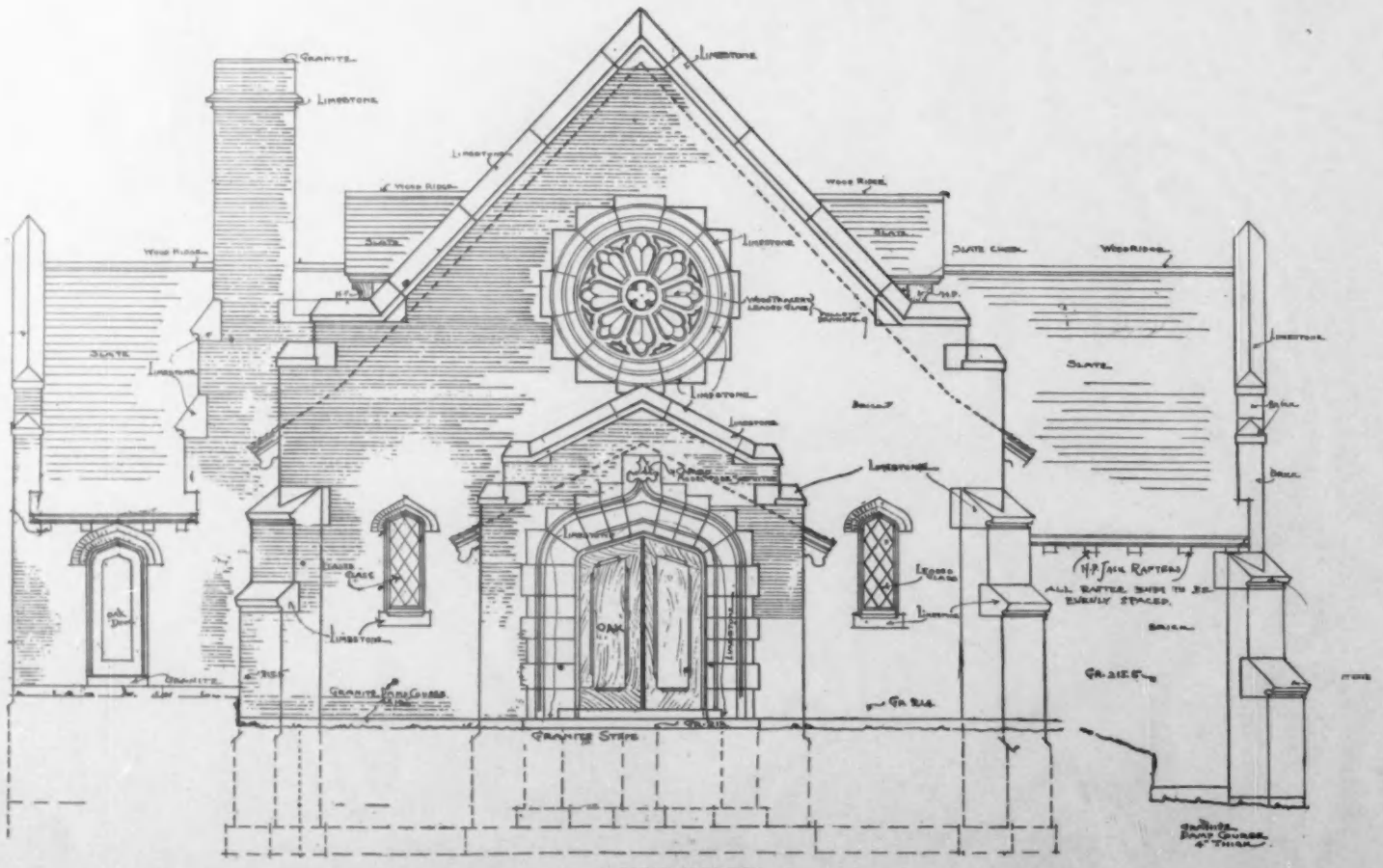
LONGITUDINAL SECTION

CHURCH OF ST. THOMAS THE APOSTLE, LOS ANGELES, CAL.

MAGINNIS, WALSH & SULLIVAN, ARCHITECTS.



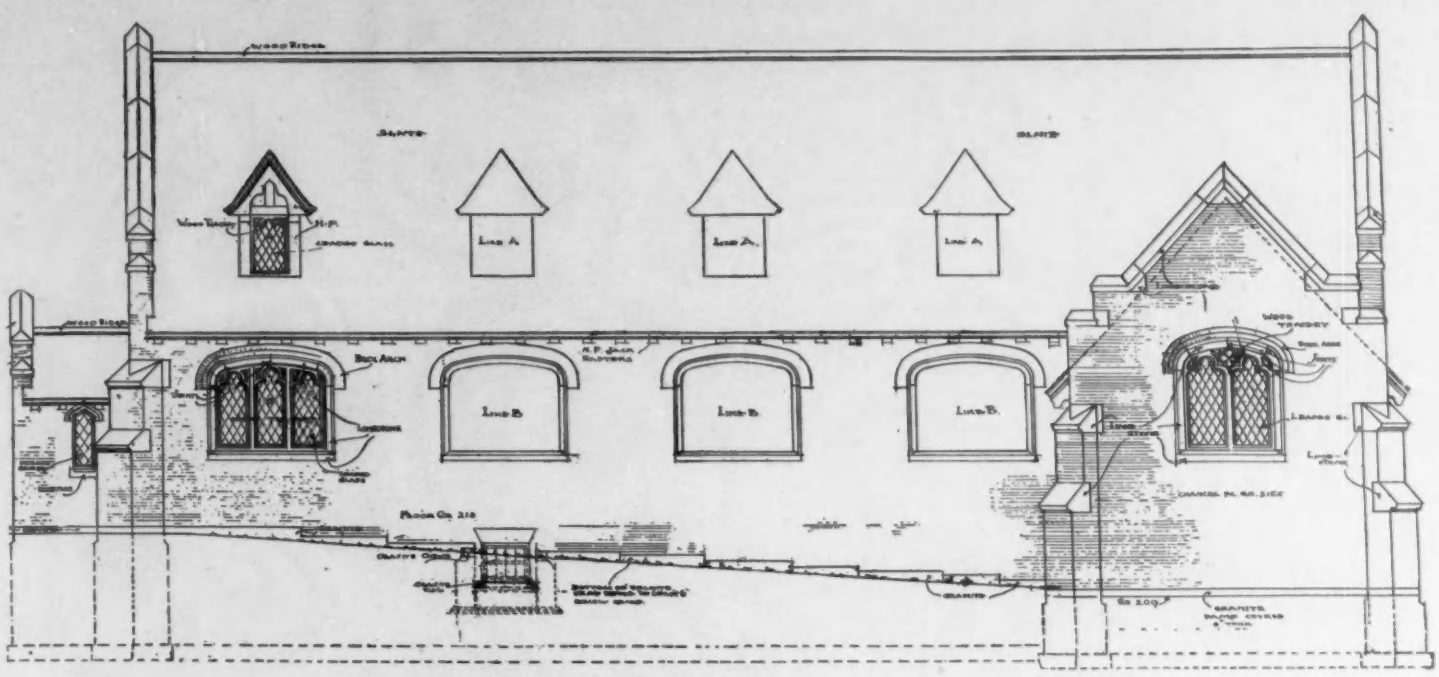
CROSS SECTION.



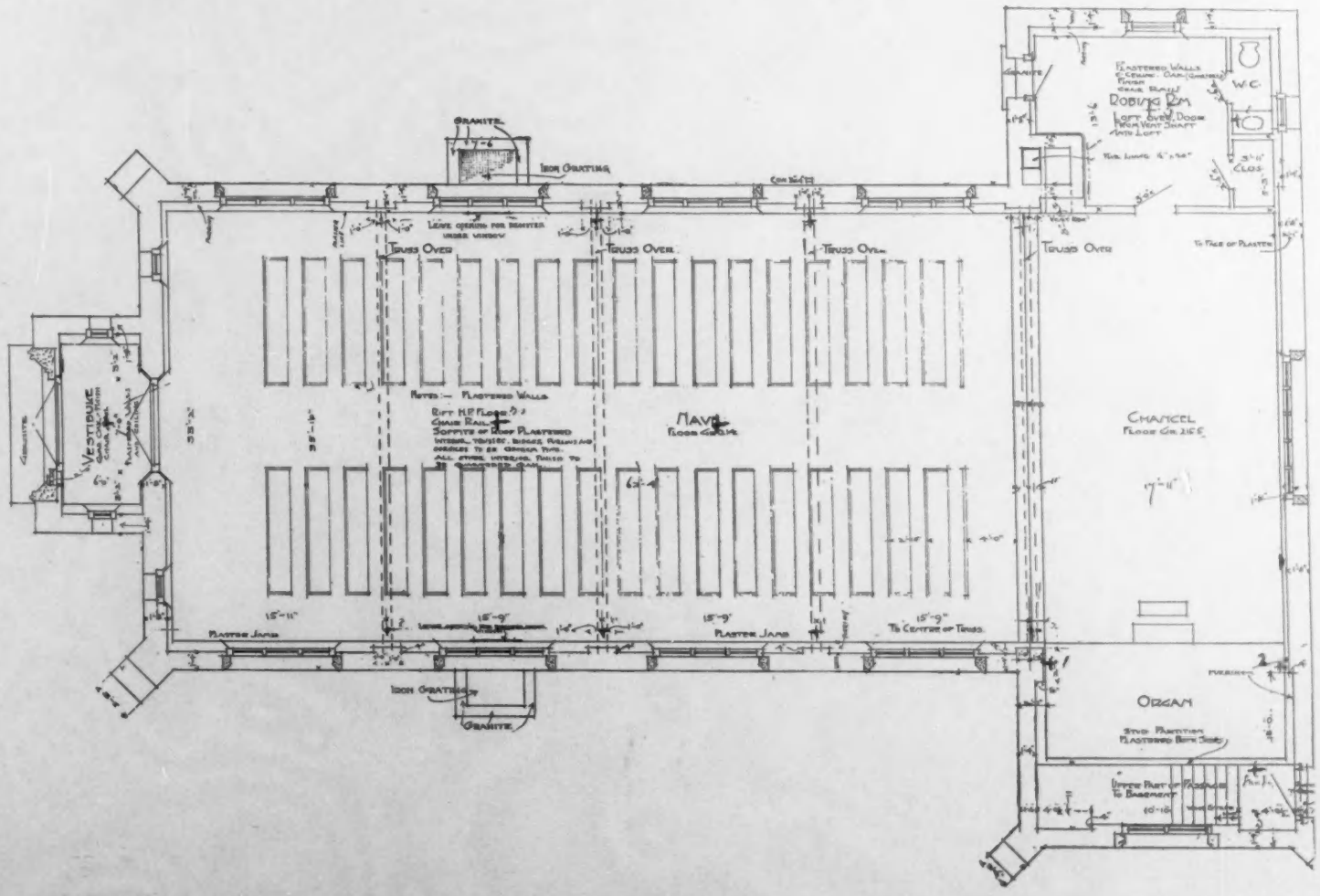
FRONT ELEVATION.

CHAPEL FOR McLEAN HOSPITAL, WAVERLEY, MASS.

WHEELWRIGHT & HAVEN, ARCHITECTS.



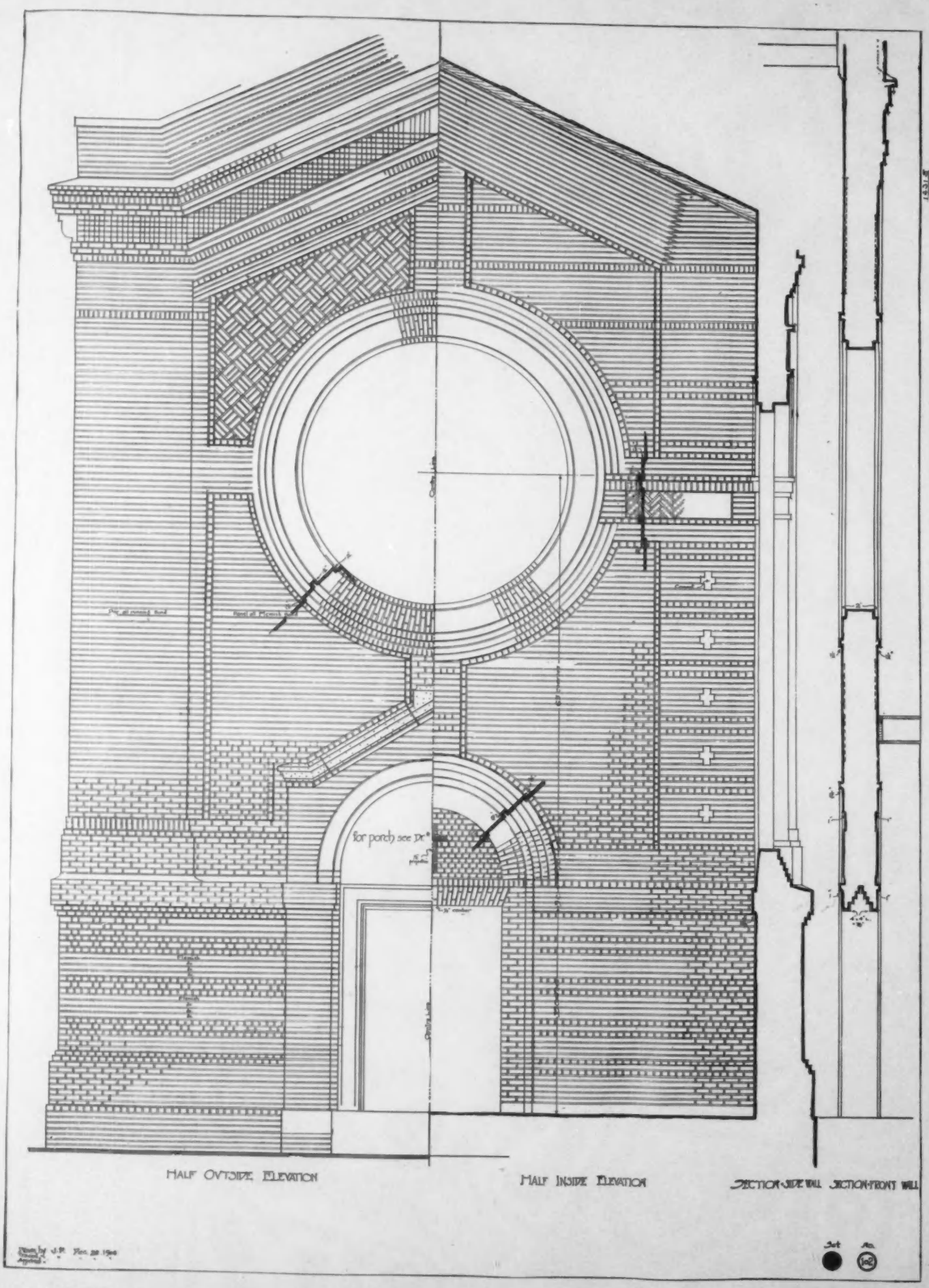
SIDE ELEVATION.

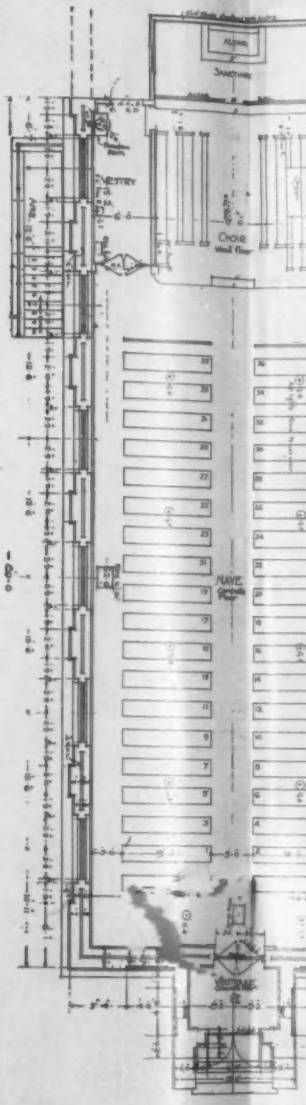


FIRST FLOOR PLAN.

CHAPEL FOR McLEAN HOSPITAL, WAVERLEY, MASS.

WHEELWRIGHT & HAVEN, ARCHITECTS.

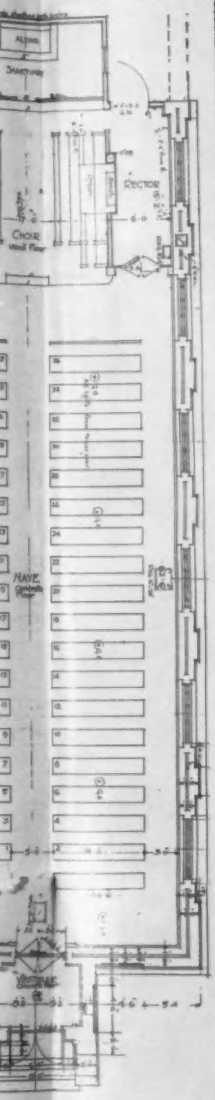




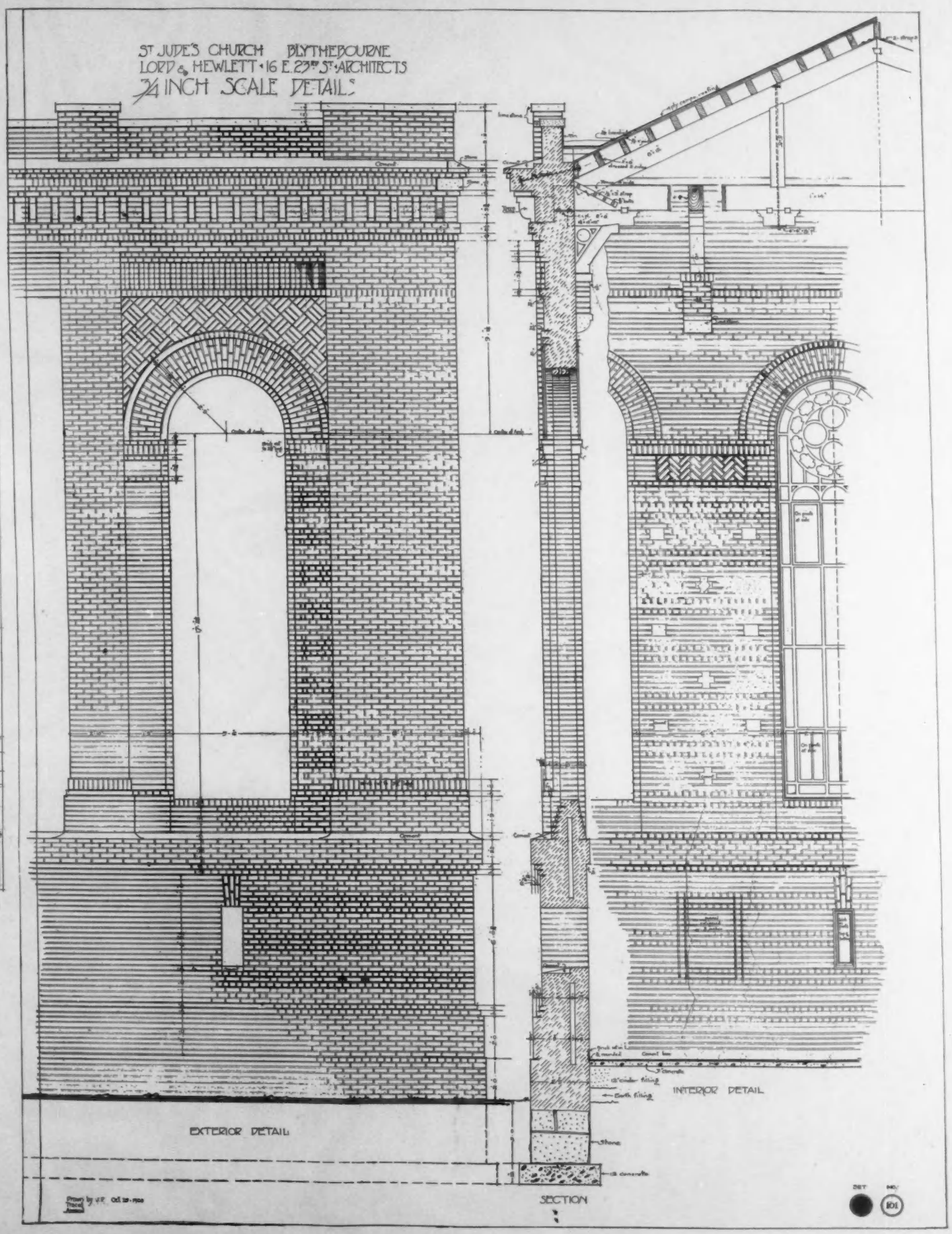
FIRST FLOOR PLAN.

ST. JUDE'S CHURCH, BROOKLYN, N. Y.

ST JUDE'S CHURCH BLYTHEBOURNE
LORD & HEWLETT · 16 E. 23RD ST · ARCHITECTS
3/4 INCH SCALE DETAILS



FLOOR PLAN.



KLYN, N. Y. LORD & HEWLETT, ARCHITECTS.